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THE SOUTHERN PLANTER AND FARMER

DEVOTED TO

Agriculture, Horticulture, and the Mining, Mechanic and Household Arts.

Agriculture is the nursing mother of the Arts.—XENOPHON.
Tillage and Pasturage are the two breasts of the State.—SULLY.

CH: B. WILLIAMS, - - - - EDITOR AND PROPRIETOR.
WM. L. HILL, - - - - GENERAL AGENT.

New Series. RICHMOND, VA., SEPT'R 1868. Vol. II.---No. 9.

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Goodwyn Agricultural Club, N. C.

This Club was recently organized in Granville county, North Carolina. It is composed of *twelve intelligent and practical farmers.* They will hold monthly meetings at the houses of the several members, alternating through the whole number. It was gotten up mainly at the instance of Mr. Stephen Goodwyn, the Secretary, whose name it bears—a complimentary testimonial of his enterprising public spirit and social merit. Since the organization of this club we hear of the formation of similar associations in different parts of the county. We hail with lively interest the institution of every one of these harbingers of progress—these nurseries of agricultural improvement. The informal colloquial discussions of intelligent practical farmers, which these associations serve to elicit, are eminently adapted to evolve the truth by the free and friendly comparison of conflicting opinions which takes place, at these meetings, thereby correcting erroneous practices, and confirming hitherto doubtful theories, by collecting and generalizing well authenticated facts which go to sustain them, or exploding them for the want of such corroborative testimony in their favor. Our memory, prompted by similarity of character as well as the power of association, recurs with both pleasure and sadness to "*The Nottoway Club,*" which formerly existed in Nottoway co., Va. Composed, as it was, of an association of gentlemen of the highest moral worth and intelligence, and skillful in husbandry, it would have borne a favorable comparison with any other similar association then existing in Virginia. The pleasing memories connected with this model club are in respect of the practical and use-

ful character of their proceedings, which were duly recorded by an efficient Secretary, and in good season reported to the *Southern Planter* for the general benefit of its readers, many of whom will doubtless recall the pleasurable emotions with which they greeted the appearance of "*The Nottoway Papers*" in that journal in days of "auld lang syne." Our sadness is occasioned by the recollection that three of the chiefs of this elite corps of farmers, viz., Dr. A. A. Campbell, William Irby, and Dr. Henry E. Shore, are numbered with the lamented dead. They were all zealous, active, intelligent promoters of local and general improvement, and were held in the highest estimation by their fellow-members, friends and neighbors, for the purity and elevation of their Christian principles and for their genial and social characteristics. The fragrance of their memories still lingers among them as of "ointment poured forth." But let us return to the "Goodwyn Club," whose auspicious beginning is so promising of future usefulness.

The following address, delivered by their President, John C. Taylor, Esq., is published by their request, and is with great pleasure submitted to our readers, as a document worthy of their acceptation, as a valuable contribution to the cause of agricultural improvement:

ADDRESS

Of John C. Taylor, Esq., President of the Goodwyn Agricultural Club, of the county of Granville, N. C., at the second meeting after its organization, at the mansion of R. O. Gregory, Esq.

Gentlemen,—The man who has not himself been a member of an agricultural society, or who has not been particularly observant of its influences on the community in which it is located, can with difficulty appreciate its importance. One sure and certain good, invariably, attends the institution; and that is, that it weds or attaches us to our profession; and inducing, as it does, thought, reflection, and combination on agricultural subjects, leads to an examination of our individual habits and practices, and consequently, in a more or less degree, to a reformation of their defects. It is the fault of most of us, that we insensibly adopt a routine in the conduct and management of our farms, without due consideration of its propriety. Thus the system we pursue is for the most part that which was pursued by our fathers. It may be said, we inherited it from our fathers. With them, it may have been a right system. They cut down their forest lands and cultivated them with little or no regard to their preservation; but they made fortunes by the process.

Lands, however, with them, were cheap and plenty, and for the most part covered with woods. With us the case is widely different. We have but few woods to cut down, while our fields are reduced to the lowest state of exhaustion. There is, consequently, presented to us the alternative to enrich them, or under the present system to reduce them finally, to absolute sterility. Now, science has made discoveries of principles in agriculture, which, in connection with the experience of practical agriculturists in Europe and portions of our own country, if introduced in our midst, would bring up these barren and impoverished fields to a state of illimitable fertility. And it can hardly be otherwise, that meeting at stated periods, listening to the detail of the experience and practice of one another, and discussing questions elucidated in works on agriculture, it can not, I say, be otherwise, but that we shall be in the first place animated to increased efforts in our profession; and secondly, that we shall obtain lights, by the guidance of which we shall increase the avails of our labors, surround ourselves by increased and increasing comforts and conveniences, and all the attendant virtues of well-directed industry: as order, system, neatness, contentment and cheerfulness, the smiling hand-maidens of plenty. All these we may fairly hope to realize, instead of the unstable, discontented and comparatively stinted condition by which we are now characterized.

The emancipation of slavery calls particularly, at the present time, for the formation of agricultural societies in the South. Men know not what to do, or what they ought to do. They doubt as to the extent to which they should cultivate their lands, the crops they should grow, and many have abandoned their farms and sought a livelihood in other pursuits. In this state of things we specially need the counsel and advice we may hope to obtain through the medium of our association. Of the innumerable subjects which will always be open for our consideration, the first in importance is the change or changes to be made in our former system of cultivation by the substitution of free for slave labor. And at the first view of the subject, we are impressed by the absolute necessity of enriching the lands we cultivate. We can't afford to cultivate poor lands with hired labor. This proposition finds a ready assent in the judgment of us all. To raise, then, the provisions, and to realize the sums of money required by the demands of the comforts and decencies of life, our hope rests on increasing the products of each acre, reducing proportionately to that increase the number cultivated, and the cost of the labor of cultivation. The question, then, is brought home to our bosoms as of vital interest, "How is this

improvement of our soil to be most cheaply and most readily made?" To discourse on this, or any other subject of agriculture, may seem "like a twice-told tale, vexing the dull ear of a drowsy man;" but in point of fact, all that any of us can do is, to discuss principles and array facts in agriculture with which men are already familiar. Indeed, there is no duty in life, in the discharge of which we may not be profited by repeated reminiscences. We may have learnt by rote the Lord's prayer at our mother's knees, and have repeated it daily to advanced age, and yet profit by hearing it read from the sacred desk on the Sabbath. And the faithful minister of Christ repeats it weekly to his congregation for half a century, and with hope of reviving their sense of religious obligation, without for once thinking of an act of supererogation. The most encouraging hope of the future success of our agriculture is the extent to which this subject of improving our lands is being impressed on the minds of farmers. Whether we use a plough of this or that construction, whether it runs deep or shallow, in a word, the whole question as to the mode of cultivation, important as it may be on the result of our labors, sinks into comparative indifference with that of the enrichment of our soil. The use of Peruvian guano, to an extent co-extensive with the means of procuring it, is unhesitatingly commended. But the purchase of this article appeals to our supply of ready money, and, unfortunately, in sums so large, as to forbid the hope of its regular supply to the requirements of our farms. Gypsum, bone dust, and other natural substances used as manure, should also attract our attention. But the various compounds, the advertisements of which meet our eye in almost every newspaper of the day, should be purchased with extreme caution, if at all. When honestly compounded and skillfully manipulated, with reference to their efficiency, they are more costly than Peruvian guano; not to speak of the risk of inattention to their thorough manipulation, and the temptation to the use of cheaper and less efficacious ingredients. The formation of a compound of simple chemical ingredients, to be manipulated on our farms together with material to be found within their limits, and remunerative of the outlay in money, it might be, without regard to the labor of the manipulation, is a great desideratum. That the elements of such a compound exist in nature, we positively know; nor can we doubt, from the known interpretation of nature, that they may be combined. I have noticed, with peculiar interest, a letter from Professor Keer, our State Geologist, to a committee of the State Agricultural Society, in which he proposes to make a manipulated

manure compounded of peat and marl, which exist in inexhaustible quantities in the eastern part of the State, together with the refuse and offal of the fisheries of the sounds and rivers of the same section, amounting to thousands of tons.

Our attention and energies should ever be directed to the manufacture of putrescent manures from all the resources of our farms. I would particularly call your attention to one source which is strangely neglected, viz: the stable. I have never known an instance in which the one-half as much manure was made from this source as might have been made, without sensible inconvenience. By hauling to the near vicinity of the stables litter, on wet days, or when the teams are unemployed, in quantities so large as never to be wanting, and spreading it over the floors the year round, in quantities no more, and at intervals no shorter, than the health and comfort of the horses require, the mass would be four-fold what is ordinarily made. By making it an object to accumulate the largest quantity within the limits of the due trampling of the horses and admixture of their dung, the mass might be increased ten-fold. We have a special inducement to increase the quantity made of stable manure at this time, as there seems to be a unanimous resolve by us to reduce our stock of cattle; whereby the quantity of land manured from the farm-yard will be diminished. This diminution, however, need not necessarily be proportionate to the reduced number of stock, except in summer cow-pens; for the quantity, and, in an eminent degree, the quality of manure made on our farms, is limited not more by the number of stock than by the amount of fodder consumed. And looking to the present practice of feeding cattle with the only purpose of sustaining their lives during winter, upon the offal of the grain crops, by giving this food to a diminished number, the manure made will not be proportionately diminished in quantity, while it will be much increased in value. The best litter for the stable is corn-stalks. It is better than wheat straw, while it is the most unprofitable of all other for the farm-yard. In the management of stable manure, there are two modes, both equally to be commended: the one is, to haul it to the field on which it is intended to apply it as it is made, and to cover the separate loads with the surrounding earth; or, to let it remain accumulating in the stalls until wanted for use. I am aware that two of our most intelligent and distinguished farmers (the Messrs. Hester), who honor us by their presence as members of our club, oppose both of these methods of managing manure, their practice being to spread it broadcast as it is made, to remain for any length

of time on the surface. Their practice, too, is supported by an eminent London chemist, whose name I am unable to recall, who maintains that the sun abstracts from it only water, and that the fertilizing ingredients washed out by rains are carried into the ground. But the practice does not accord with my own opinion after two, but only two, very satisfactory experiments. To cast manure from the stable into pens, or heaps, exposed to rain, or to firefang by excessive fermentation, is to waste seventy-five per cent. of its value.

We know from our observation of the practice of others, that by confining hogs the year round and feeding them bountifully on grass and herbs during the season of their growth, passing them through the kitchen in the form of slops, that they can be raised of much greater weight, and with no more expense of corn, than when running at large. So that he who will incur the trouble and continuous attention required for so raising them, keeping an eye to the making of manure, may accumulate a mass quite equal in value to the food they consume. But few, if any of us, have patience, at present, to incur this trouble; but the liability to lose our hogs by thieves while at large, may in time force us to confine them, it may be under lock and key; and "necessity's sharp pinch" may indoctrinate us with the patient virtues of nursing and feeding them, and of so caring for their manure as to make the undertaking a profitable one. In the meantime, it is an inexcusable neglect in us not to litter their pens with an eye to making the most manure during the five or six weeks we feed them unstintedly with corn, as a preparation for the slaughter pen.

I had intended to bring to your notice a subject of all others of the deepest importance to us, viz: the supply of humus to our worn soil by green crops. But as I have already exceeded the limits I prescribed when I took up my pen, I will, by your leave, present my views upon the subject at our next meeting. A few words not inappropriate before an agricultural association, and I will conclude these unconnected and hastily written remarks. In alluding above, to the influences of agricultural societies on the communities where they are located, I should have awarded, in an eminent degree, the credit of these influences to agricultural journals, the circulation of which agricultural associations always promote. If the proposition be true, as it unquestionably is, "that agriculture is more indebted to the pen than to the spade," then any argument in support, at least of agricultural reading, would seem to be as useless and unnecessary, as to argue that a professional man, a physician e. g.,

should seek a knowledge of his profession in books written upon the subject of it. And if it be thought that an adequate stock of agricultural knowledge may be derived from text books, and other volumes on the subject, I reply that these volumes, except in very limited numbers, are not to be found in our libraries. And supposing it were otherwise, and we diligently read and studied them, (not to speak of the use of agricultural journals in freshening and reviving the knowledge thence derived, and presenting subjects for its application,) it should be borne in mind that agriculture is a progressive science; that it has been more advanced in the last hundred years, (within the period of the establishment of agricultural societies and agricultural journals,) than it ever had been before—than it ever had been since its institution by Adam and Eve in the garden of Eden. At the present period, thousands of contributions by scientific and practical farmers to the stock of agricultural science, are being annually made, many of them embracing discoveries of unknown principles and improved forms of practice having application to our own economy. And it is within the province of agricultural journals to disseminate these contributions throughout the civilized world. I am here reminded of a not uncommon error by which many men are thoughtlessly impressed, to wit: that the information which these journals contain proceeds from the individual minds of the editors. There could not be a wider mistake. The pages of a good agricultural paper are filled almost exclusively with selections from standard works on agriculture, from able concurrent journals, and original communications by farmers, for the most part detailing the results of their own experience; the last previously receiving the approval of the editor in reference to their merit or utility. So that the choicest and most valuable information on the subject of his profession is thus brought home to the bosom and business of the reader. The spirit of enterprise and fondness for agricultural pursuits which these journals create, would alone repay their perusal. So many, and of so equal consideration, are the inducements to peruse them, that in despair of noticing them all without extending these remarks to an indefinite and tedious length, I have hesitated which to present. A great man in another department has said, "it should be the object of every man to do something for his profession." Cherishing that object as I do, I should consider it consummated in the degree to which I might contribute to the circulation of agricultural journals.

"Confession of a fault makes half amends for it."

On the Improvement of our Exhausted Lands.

"Well must the ground be digged and better dressed,
New soil to make and meliorate the rest."—DRYDEN.

The importance of improving our wornout lands was well and forcibly expressed by Swift, when he said, "He that causes two blades of grass to grow where but one grew before, deserves to be regarded as a benefactor of mankind." This being conceded to be true, he who so improves his poor soil as to make it produce *two ears of corn* where only one was grown before, should be doubly blessed by his fellows, and his name should be handed down to posterity as worthy to be recorded on the brightest roll of fame, high above that of the most renowned warrior or the most successful cultivator of the fine arts. If this be the appropriate reward of the good husbandman, how does his calling rise in dignity and importance, high above the position which the misjudging of the present day would assign it amongst the occupations of life. Let our hardy, industrious and unassuming cultivators of the soil *look up* and take courage, for the world is growing wiser, and will soon place their honorable and heaven-appointed calling at the head of the list of the most honored, as it confessedly is the most important and most useful of all the vocations known amongst men.

In the February number of your valuable journal, you published, by direction of the Central Agricultural Society of North Carolina, my essay on the cultivation of corn, to which was awarded, by that society, the premium for the best article on that subject. That essay has been criticised by your correspondent, Dr. Mott, because it did not point out *a mode of cultivation* by which the greatest quantity of corn might be produced, and which should, at the same time, *enrich the soil.* I frankly admit that I know of no such process; nor do I think it possible. I look upon it as impracticable as would be the attempt to bore a hole in a barrel which should increase in quantity of its fluid contents whilst it should draw off at the same time, at the rate of a gallon at every second of time. If the individual lives who can make a most impoverishing process contribute to the fertility of the soil, he should be preferred to an *agricultural benefice;* and if possessing the other indispensible qualifications, he should be canonized as a saint. Acknowledging my utter inability to do this, I will endeavor to point out a mode by which our exhausted lands may be renovated, *not by drawing from them* the greatest amount of their productive properties, but by *adding* to them both green and dry vegetable matter, by supplying those chemical ingredients in which they may be deficient, and by

suitable drainage and deep ploughing. I take occasion to state that the suggestions which I shall offer on this important subject will not be the crude conceptions of a fertile imagination, but the result of an experience of many years of close personal attention to the operations of a large farm.

In January, 1829, I took possession of a tract of land in Halifax county, which had been leased for years to tenants, who sought to make the most of their bargain. The consequence was, that after having exhausted a field, they "turned it out," and confined themselves to the "fresh land," which they had cleared from year to year. By the by, this is too much the practice of the proprietors themselves, who own the fee simple in the soil. In an "old field" which had been thus turned out by one of these tenants, he had made "a standing turnip patch," on which he penned his cattle from April to August of each year. On this favored spot, which being immediately on a very public highway, he grew the finest turnips, which attracted the notice not only of his neighbors, but of travelers from a distance. Intending to cultivate this field in 1831, I had the pines, which by this time had attained to a height of from five to ten feet, dug up and thrown over its surface, to protect it from the summer's sun. In May, 1830, after burning the brush, I had the land ploughed very deep with a keen coalter. It was then sown with the "black eye" or common field pea, and turned over with a *one-horse* Dagon plough. An abundant crop was produced, all of which should have been "turned under;" but I was tempted, in the fall, to allow my hogs intended for the pen to revel in the peas. This, of course, abstracted largely from the amount of fertilizing matter, which was returned to the soil when just before the advent of frost the vines were well covered by means of a *two-horse* Dagon. The entire field, including the farmer's turnip patch, which had been highly manured for a succession of years, was planted in corn the succeeding year, and whilst every part of the field yielded a very fine crop, that portion of it which had been in peas was far ahead of the favored spot. The superiority of this portion of the land was visible in all the crops grown upon it whilst I continued to cultivate it, and I dare say that the disparity exists to this day. I have tried other green crops as improvers of the soil, but I have never found one of them comparable with the field pea. Its superiority, I suppose, is owing to the fact that it is a *more succulent* plant, and that in comparison with most others, draws *less from the ground*, receiving a much larger proportion of its nourishment *from the atmosphere*.

As this article is intended for the instruction and benefit of the farmer of limited means rather than of him who can afford to purchase largely of guano, lime, plaster, and the manipulated fertilizers; of the *small craft coaster*, who is obliged to "keep near the shore, and to sound with the plummet at every advance of his vessel, rather than of the bold navigator, of larger resources, who can afford to cross the ocean in search of the means of improving his farm, I shall confine myself mainly to the preparation and use of *domestic manures*, such as the individual of the most circumscribed means may secure to himself by proper management.

First, then, let me say that all such should *cultivate* not more than one-half of the land which they have been accustomed *to scratch* in times past. Let them *manure and cultivate this well*, and their product will be more than doubled. The time thus saved by this reduction of area, may be profitably employed in gathering up manures of various kinds, to be used on their next year's crops. As an inducement to do this, let them remember that it costs as much of labor and of expenditure of money to cultivate an acre of land which yields only one barrel of corn as one which will reward them with ten barrels. But I shall be asked how we are to obtain the manures which will produce such a happy result? I reply from sources which are all around you, but which you have strangely overlooked. First, then, you should make a proper application to your land of all the soap suds, night soil, urine, and kitchen garbage which are now thrown away as worthless, but which, if properly preserved and used, will prove of great value. Much fertilizing material may be obtained by scraping up the deposits of decayed leaves and other vegetable matter to be found in the corners of your worm fences; by gathering up the ashes and scrapings of your back yards; by heaping up the leaves in the woods, in pits dug for that purpose, at suitable distances, and by throwing upon them the soil from the adjoining ground. The advantage of gathering the leaves in the woods, over the usual practice of removing them to the farm pen, is that you take them directly from the woods to the field, and thus save one loading, unloading and transportation. If these pits shall not be so far from the house as to make it too inconvenient, the soap suds and urine should be thrown over the leaves. All of your corn-stalks should be hauled to the farm-pens and fed to your cattle, taking care to have your wagons and other wheel carriages to pass over them as often as may be found convenient. This will crush them, and facilitate their conversion into good manure. From these, from the stables, which should always be well littered with

straw or leaves, from the wood pile, the chicken coop, the hen house, the hog pen, and other sources which from time to time will be presented to the observant farmer, he may derive a vast amount of fertilizing matter which, if deposited in the hill with the corn when planted, or placed around the plant when weeded, will increase his crop two, three, or four-fold. With the proceeds of the surplus over and above what may be required to support the family, fertilizers may be purchased to be applied broadcast over the land, which will, in a short time, put it in a condition to grow clover and other grasses, when the owner may congratulate himself that, with a *judicious rotation* of crops and *proper* ploughing, the improvement of his farm will progress rapidly, from year to year, until he will with difficulty realize the fact that he is living on his old homestead.

Of all the grasses, the clover and the Lucerne are the greatest improvers of the soil; and this, not so much on account of the greater amount of herbage which they return to the earth, as by reason of the fact that their roots shoot deeper into the ground and draw thence the mineral ingredients which are required in the production of the various crops grown on the fields. The Lucerne is about ten days or two weeks earlier than the clover, and affords to horses and cattle their favorite food before the latter is fit to cut. I regard it on this account, as an invaluable article to be grown upon every farm. It possesses one other advantage over the other grasses: it serves as an excellent bordering for the garden squares, keeping them up without care or trouble to the cultivator. It does not require to be resown oftener than once in eight or ten years, and may be cut three times in each season. If cultivated elsewhere than on the borders in the gardens, it should be sown early in the spring, on rich land, in ridges, two and a half feet apart, and worked as cotton is.

As preliminary to all other effort at the improvement of the soil, a proper system of *drainage* should be adopted wherever, either from its impervious character or the configuration of the ground, the water is prevented from making its escape. It is a useless labor and expense to put manure of any kind on land which is constantly soaked and saturated with water. As well might you attempt to minister to the health of a patient whilst he is allowed to remain in a half drowned condition. If ditching be required, it should be *judiciously located* and well executed. If the evil to be removed be occasioned by the character of the soil, which prevents the water from freely percolating through it, the remedy will be found in *very deep and close ploughing*, taking care to subsoil each furrow with a

long, sharp coalter. By deep ploughing, I do *not* mean that the land shall be *turned deep*, but that it shall be broken as far below the surface as it can be reached by any plough yet invented in this or any other country. If one could be found which would effect this to the depth of *ten feet or more*, its value to the agricultural interests of the country could scarcely be estimated. I shall not stop to show how this deep and close ploughing increases the *capillary attraction* of the land, by which the moisture is *raised* to the roots of the plants, in seasons of drought; or to point out how, by the same process, the attraction of *gravitation* is facilitated, thus causing the water to *sink* below the roots when there is a superabundance of rain, in both cases to the great benefit of the growing crop. The keeping the ground clear of grass is not by any means the sole object that the intelligent farmer has in view in ploughing his land. He endeavors by this process to *solicit the moisture from below* in dry weather, and to *quicken its descent* when there is too much rain. To illustrate the "modus operandi" by which this is effected, it will suffice to advert to the fact, familiar to every reader, that if you immerse a compact loaf of sugar in water, it will require many minutes for the fluid to penetrate through all its parts; but if you reduce it to powder before applying the water, it will be saturated in a few seconds. Just so is it with the earth. If you break it shallow and leave it in clods, it will be slow to absorb the moisture from below; whilst if you plough it very deep and close, and thus separate its particles thoroughly, it will, like the pounded sugar, take up the moisture with very great facility. The depth to which the land should be *turned* should be regulated, in every case, by the depth of its soil. If that be but one inch, the land should be turned not more than one inch and a half. The proper rule to be observed is to turn up just so much of the subsoil as will glaze the surface. In proportion as you go beyond this, the crops for that year will be diminished; but the land will be *ultimately* benefited.

In conclusion, I would urge upon our farmers the importance of organizing "Farmer's Clubs" in every neighborhood, the members of which should meet alternately at each other's houses, at stated periods, for the purpose of free conversation and discussion of matters of interest to their calling. In these meetings the experience of each member might be laid before his brethren, and thus the success or the blunders of each might stimulate the others to follow the example or to avoid the errors of their associates. Not the least benefit to be derived from such associations would be that it would

enable them, at but small cost to each member, to employ some competent agricultural chemist to visit their farms, analyze their various soils, and give full written directions as to the kind of fertilizers best adapted to each field, and to the particular crop to be cultivated on it. The importance of such knowledge on the part of our farmers is not, I am sure, appreciated by them as it should be. Without it they will go blundering on, sometimes using articles which injure rather than improve their land; and at other times, applying that which passes as a fertilizer, but which does positive damage to the growing crop. As well might the physician give the same kind of medicine in every case of disease, as the farmer apply the same kind of fertilizer to every soil or every crop. The success would be about equal in the two cases. It would be downright quackery in both, and they would reap the like reward—the one would *lose his patients*, the other *his crops*. Nor is this to be wondered at. There are many medicines known amongst educated physicians as wholly *incompatible substances*, and which, when united, produce a new and an entirely different article from either. Fortunately for the patient, this new compound is often *inert*, and consequently *harmless* in its character; but it frequently happens that *a poison* is the product, and then the poor patient "dies *of the Doctor*," and not of the disease, as his family and friends vainly suppose. Just so it is in agriculture. There are soils greatly benefited by fertilizers possessed of certain properties; whilst there are others, perhaps in the same field, which would be poisoned by the same article. For example, most soils are much improved by the judicious application of lime, whilst there are others which would be injured by it. And so, again, as in the case of medicines, incompatible substances are often employed as fertilizers, the union of which forms a new compound (wholly different from either ingredient used), which sometimes proves harmless, sometimes causes the valuable gases to escape, and thus renders the whole worthless; and in other cases often proves injurious to the land and destructive to the growing crop.

It was the established custom in my neighborhood, when I was a practical farmer, that the ladies all around rewarded with *a chicken pie* him who was so fortunate as to *kill a hawk*. On this principle, which I very much honor, if I could induce our farmers to practice on the system which I recommend, I should be regarded by them as a benefactor of their craft, and should be cordially invited to their board whenever it should be spread with the choicest viands.

I wish that I could say something to stimulate them to greater

efforts to improve their farms, as well as their system of agriculture. I know the apathy which has been brought upon them by the oppressive acts of those who control our governmental affairs, and this, at a time when more than ever before, the greatest energy and effort are required to keep their heads above water. But let them not despair; a brighter day is ahead for us of the South. That we may hasten it on, let us all redouble our efforts, and by industry, economy and perseverance, make ourselves as comfortable as possible, and thus disappoint the malice of those who would grind us to powder by their unheard of exactions and oppressions. Our Radical rulers may despoil us of our property and our civil rights, but they cannot deprive us of the sunshine and the rain. They cannot prevent the bountiful earth from yielding rich returns to the industrious husbandman, who rises early, *drains well*, *ploughs deep*, *manures freely*, and *cultivates carefully*. Let our farmers do this, and despite of our enemies, the earth will yield her increase; and their hearts will be made glad by the abundance of their crops. Then let them not despair of God's blessing, for

> "He cheers the fearful and commends the bold,
> And makes despairers hope for good success."

TH. P. ATKINSON.

Our Exhausted and Abandoned Lands.

WHAT CAN WE DO WITH THEM?

No. 7.

(Continued from page 404.)

LESPEDEZA STRIATA.—The previous papers having prepared the way for it, I now proceed in an attempt to answer the inquiry under this general heading, directly, by observing:

First; that we may do anything we please with them in the way of grain producing lands, if we can only muster the courage to commence the system whose leading principles have been laid down, and patience and perseverance to carry it fairly out. The idea of making the land do the whole of its own work not only in preserving but even in renovating itself, if not a new one, is at least one that has never yet been carried into effect by any one among us, so far as my knowledge extends. But is it on that account any the less practicable? Is it, therefore, a falacy? I think not. It certainly would not be very good logic to assert that a thing cannot be done because no man ever yet has done it, or attempted it. It would be difficult, it appears to me, to produce a more obvious non-sequitur.

Let any one try it; try it fairly and perseveringly. If it fail, no very great harm can be done. if it succeed, a great good will have been done to the country—not only to the country, but to the world.

For a man to settle down upon some tract of this kind exclusively, and attempt to make a living out of the proceeds of it alone, would of course be very foolish. That is not what is intended. No such doctrine can be extracted from the preceeding papers without a gross perversion of their literal meaning. On the contrary, the idea intended to be conveyed and earnestly inculcated is, that while a person is cultivating the better portions of his tract with a view to the supply of immediate wants, he may also at the same time gradually bring in such exhausted and abandoned parts of it, as there may happen to be, without outlay of capital; and in a few years, may make them equal to, if not better than the best fresh soil he has, at less expense of labor than he can clear up new lands from the forest. It is needless, I trust, to recapitulate the process. The various steps in it have been stated so plainly and represented in so many different points of view in what has already been said, that to repeat them here would be quite superfluous. The plan I conceive, is founded in Nature. The great thing is to consult her, and to work in accordance with her dictates. In a thousand ways, she unfolds and demonstrates to us her recuperative powers. Only let her have a fair chance, and she will do her own work. It may be slow, but in the end will be none the less certain and effectual. Instances enough in illustration of this have already been adduced; and in view of them, I do not hesitate to give it as my undoubting belief that every foot of exhausted and abandoned land in the country—no matter how poor, how completely denuded of its surface soil—may be brought back not only to a state of fertility equal to that which it originally possessed, but actually surpassing it. For the general principle on which this belief is based, is a fixed one. It is recognized by the man of science as well as by the intelligent and systematic cultivator. All agree that, if a beginning can once be made by getting a growth of anything on the surface, improvement may thence be carried on to any conceivable extent by letting the land alone to do its own work in furnishing material to feed and improve on.

The great, in fact the only, concern, therefore, is to get a start—a vegetable growth of some kind as a protector and renovator to begin with. In this, as in every thing else, it is the first step which is difficult. That accomplished, every other step will follow with comparative ease.

Let me then here observe, that if I and numbers of others

about this part of the State, are not very much mistaken, a kind providence has been gradually furnishing us, during the last ten or fifteen years, with the very agent we stand so much in need of, for this purpose—an agent, if we will only avail ourselves of its assistance with some little patience and skill, that will certainly bring about the result desired. I refer to the Lespedeza, or as it is more commonly called, the Japan clover. My own attention was not called to this plant till late in the summer or early autumn of last year. Of course the time has been too short to admit of much careful and accurate observation on its habits and effects; but from what little I have been able to gather with regard to these, I am led to these two undoubting conclusions: first, that it will grow wherever the seed happens to fall; and second, that it will enrich the ground, to more or less extent, wherever it does grow and is permitted to do its own work without molestation.

As a proof of the first position, in March last, I scattered some seed of it on a very small spot of the poorest ground to be found on an old worn out and long abandoned field, observing to a neighbor, who happened at the time to be with me, that if it would grow there, it would grow anywhere. To my surprise in a few weeks it made its appearance and before the end of June had become a thickly matted and nearly continuous mass of herbage, closely covering the ground and shielding it, in proportion to its height, from the exhausting heat of the sun. It is true, it was very short; but what else could one expect on a spot so poverty stricken that even sedge grass could not rear its head over a few inches and that in widely detached tufts! Yet the evidence of the above position that it will grow anywhere, was none the less conspicuous; for it grew there, on that miserably barren spot and grew so vigorously, that, notwithstanding the severe dronght we have had of six or eight weeks duration, it is now fairly promising, as it does everywhere else it takes hold, to root out sedge grass and all other useless cumberers of the ground, and in place of them cover it with a thick mossy carpeting of herbage fitted at once to beautify and enrich it. Since March last, I have been watching this plant with a good deal of care and attention, and have found abundant confirmation of the fact that it will grow wherever vegetable life can get a foothold, except the densely shaded woodlands covered with decaying leaves. It is found on the most apparently sterile hillsides, on the damp, springy spaces at their foot; on poor and sandy, as well as more fertile levels; and even on spots denuded of every particle of surface soil, where the hard stratum of clay would seem to exclude the possibility of vegetable life.

But this is not all; for in proof that it will, in a greater or less degree, enrich the ground wherever it does grow, let any one in winter examine some spot where it has taken strong hold the summer before, and compare the surface there with that immediately adjoining where it did not grow, and he will be struck, as I have uniformly been, on doing so, with its comparatively dark, loamy appearance—its lightness and friability to more or less depth. This will be particularly observable on low and damp places, though by no means confined to them. In any situation the improvement, as far as the eye can judge, will be obvious. In brief, the impression thus far left upon my mind is, that we have in this plant an invaluable natural restorative of our worn out lands—something that will make a beginning in the work of restoring them, where in some cases, as far as we can see, nothing else would, without expense; which will bring the most barren and desolated of them in the short space of two years within the possibility of complete redemption, laying the foundation for any future improvement through subsequent use of the means and appliances heretofore pointed out.

But it is not in this point of view alone, as a means of commencing the work of restoring our exhausted and abandoned lands, that I must regard this plant as a blessing sent of God to this, at present, poor and suffering country, but as affording a pasturage for any kind of stock of great and permanent value. Could any man point out to us a way of covering these old waste places with a good coating of any of the kinds of grass familiarly known to us as well adapted to grazing purposes, and that in the short space of two years—a coating, moreover, that would be permanent, growing better and better every year, as from present appearances, this promises to do, if allowed a reasonable chance, who among us would not admit that he had done a great national service? Who would not rise up and call him blessed? Yet the Lespedeza, unless we are very much mistaken, promises to do, if not this very thing, something that will be fully an equivalent to it. That it can be set thickly on our poorest old fields where there is any surface soil, in the time specified, is as certain as that it exists; and that stock of all kinds will not only eat it, but fatten upon it, admits of just as little question. The evidences of these facts are abundant and strong. It is the testimony of all whom I have questioned upon the subject, except a very few who admit they have paid no attention to the matter. Of the numbers conversed with in this and other vicinities, I have yet to find the first person who denies that stock will feed up-

on it, and that where it abounds they take on flesh in a way they were never known to do before it made its appearance. Such is the report we get from some of the adjoining counties, particularly from Mecklenburg, where owing to the greater fertility of the land, the Lespedeza is more widely spread, thickly set, and attains a more vigorous growth. Wagoners between this and Charlotte say, their horses, when turned loose at night, will seek it out in preference to any other grass to be found. That hogs, sheep, and horned cattle are equally fond of it, is easily inferred from the way in which it is kept down by them wherever they run in sufficient numbers to consume it. In such places, however thickly it came up in the spring, they are sure to eat it out during the summer.

The South, then, and for aught we know to the contrary, the whole country—for it is to be presumed it will do well in any latitude not higher than northern Japan—has in this plant a direct and fruitful source of positive wealth. What grazings for hogs may be found along our lanes and roadsides, or made on the old fields where they now find nothing better than the roots of the pine and the brier! What noble pastures for horses, and horned cattle may be created on these wastes! What extensive sheep walks! What rich and abundant croppings for the Cashmere goat, whose fleece sells at six dollars the pound, and more, according to quality! In this point of view, our old fields promise to become better than gold mines as pasture lands alone. For the Lespedeza does not appear to suffer like most herbage from the trampings of animals. It seems to have the property of loosening up the surface soil for itself; and every spring is found standing forth freely and luxuriantly where the ground had been hardly trodden the summer before, and the plant to all appearance ground out. This may be seen about cowyards, for instance, or other spots where cattle congregate. If in the public highway where there is the least spot not ground to dust by wheels and horse shoes, that is the very place to look for it. Pastures of it, therefore, instead of being worn out in a few years, as in the case of the common grasses, will be likely to improve from season to season, and finally by this means alone become convertible to other farming purposes. This will be more evident if we consider that the Lespedeza is an annual, which scatters its seed with a profusion scarcely credible to any one who has not observed its habits. However closely cropped, this seed is always left in abundance for the succeeding year. It may be collected and sent to any part of the country, at far less expense than that of

any of the common grasses. After the second year, any person may collect seed for his own use.*

If then these things are so, and I honestly believe that they are to the fullest extent that I have represented them, how desirable it seems that this plant should be spread as soon, and as widely as possible throughout the southern country! How far and in what particular directions it has thus far extended among us, I do not know. It is said to have first appeared in Florida, about fifteen years ago. It has not been abundant enough in this latitude—about thirty-six north—to attract particular attention till within the last twelve or eighteen months. I have never heard of it north or east of Rowan county, in this State, though it may have gone farther in that direction. Its progress, therefore, has not been rapid, and the fair inference is, it will not have reached the Atlantic counties of Virginia for some years to come. Yet, if there is any part of the country, which on account of its proportion of worn out lands requires its aid more than another, it is probably that State. What a mighty coadjutor would this plant be in the great business of sheep husbandry, which some leading men in that State are now making so great an effort to foster and extend. I have seen sheep eating it freely, and am told they fatten on it very fast. Is there then any more feasible plan of carrying that object out than the introduction of a plant which at so very little trouble, or expense will furnish so large an amount of summer pasturage and winter food? On high and dry grounds, for it evidently loves meadows, it is not likely the Lespedezæ could be made largely available for winter provender without careful and expensive cultivation; but on damp and fertile places, along branch and river bottoms, it is said to attain a height of from two to three feet, a very dense standing, and to make a hay fully equal to the common red clover. Gentlemen in whose word every confidence may be placed, assure me cattle are so fond of it, that they will pick it out from amidst any other kind of rough provender that may be offered them. A meadow of it, well set, would doubtless last for many years without other trouble or expense than that of keeping down bushes, or any very rank weeds that might chance to spring up.

T. S. W. Mott.

Garden Farm, August 10th, 1868.

*Any person wishing to communicate with me on this point, can do so by addressing me at Sherrills' Ford, Catawba county, North Carolina.

"Self-interest is the rule; self-sacrifice the exception."

Liming Seed Wheat.

Mr. Editor,—Your correspondent, "A. B.," must be mistaken in supposing that the use of lime on wheat to prevent smut, will materially affect the guano used on the crop. Lime is a powerful agent in releasing ammonia from guano; but it is necessary that they be first brought into immediate contact. The guano is generally applied broadcast to the land, and the lime adheres to the moistened grain; so that, of necessity, it can come in contact with but a very small quantity of the guano. And besides, if the guano is tolerably rich in ammonia, and applied at the rate of 150 lbs. or more to the acre, or even 100 lbs., it can afford to lose a little of its ammonia, and still have enough remaining for the use of the wheat crop. All of this in addition to your remark on the small quantity of lime used. I have limed my wheat when using guano for years—frequently with very fine results.

As soon as my wheat is threshed and measured, if not ashamed of the result, I may report the yield. The Pacific guano, as far as I and others could tell from the general appearance of the crop during different stages of its growth, acted well; and at one time there was promise of a very fine yield; but there were several causes to prevent this: want of sufficient drainage, and, as a consequence, winter killing; saturation from the heavy and continued rains of early spring, and very considerable rust while ripening.

Two instances of perfect failure in a wheat crop have come under my notice this year, resulting from the use of a *mixture* of lime and guano; and I think I remember to have seen one last year. In one instance the mistake was made by an intelligent, successful farmer, who conducts his operations on a pretty extensive scale. I have thought several times since that I would call the attention of farmers to the fact that lime is a powerful and immediate agent in releasing ammonia from all ammoniated manures, whether domestic or concentrated. But I thought the fact was pretty generally known; and am not sure that one reason why I did not was, that in each case I have mentioned, the mistake was made by persons who read no agricultural paper. I felt they richly deserved the loss, and advised them to send on for the *Planter and Farmer*. I am confident the loss in each crop would have paid for the paper the rest of their lives, even should they approximate the age of the venerable Methuselah. I am glad "A. B." has done this. It is a well established fact, which ought to be known by every farmer, and the "modus operandi" of which may be easily found by reference to any respectable work on chemistry.

Several years since, before the war, and while yet a very inexperienced farmer, as I still am, I had been using Elide guano on my tobacco crop, and had one bag left for which there was no special use. Though knowing that ashes and guano do not agree very well together, I determined, through idle curiosity, I suppose, to mix it with an equal quantity of strong, unleached ashes, and apply it to corn. The mixture was made in a close room, and the escape of ammonia was so great and instantaneous as to drive every one quickly from the room. I do not remember the effect produced on the corn.

If "A. B." had used plaster instead of lime with his stable manure, he then would have had a fine manure for his fall seeding of wheat. I have frequently seen coarse farm-pen manure piled, with lime sprinkled in through the heap, for the purpose of reducing it to fineness; but have never been satisfied that the plan was a good one, unless with the proper admixture of a good deal of ditch dirt to the compost.

The remark is frequently made, Mr. Editor, that theory and practice don't agree in farming; as well say they do not agree in medicine, or in mechanics, or in anything else. When they do not, it is because the theory is drawn from principles not sufficiently established, or, as is especially most often the case in farming, the *practice* is *very defective*. "I can easier teach twenty men what were good to be done, than be one of the twenty to follow my own teaching."

I have heard my good old pastor say several times, in speaking of the failure of crops in the South since the war, that Providence seems to have cursed our very soil, and it doesn't yield as it did in former years. The curse came when Adam was driven out from the garden: "Cursed is the ground for thy sake; * * * in the sweat of thy face shalt thou eat bread." If there be an additional curse on the soil, it is the curse of the freedman (as he is on teams, and sheep, and hogs, and poultry, and fruit, and fences, and our own peace of mind). The one great difficulty now is, there is not enough of *the sweat* expended on mother earth. And when a farmer tells me he can sit in his sulky, with an umbrella over him, and plough his corn during the week, and ride in the same machine to church on Sunday, I think "in the sweat of thy face shalt thou eat bread." And when another says that he is getting on more comfortably now than when he owned slaves—that he has fewer cares now; that he has rented out most of his land; that he has a larger surface in cultivation than ever before; that he is working

with several gangs of hands on shares—I understand it all, Mr. Editor, from my own sad experience. I *know* it all means double ploughs and thorough cultivation discarded for single ploughs and shallow scratching, with lean horses and lazy negroes; fences going down, with ditch banks and hedge rows growing up; teams and crops and farm, as Pharaoh's lean kine, "ill-favored and lean-fleshed," and at the end of the year want and ruin staring you in the face. Any accidental gains of preceding years swallowed up, and had they "eaten seven other fat ones, it could not be known that they had eaten them."

Then comes the vital and oft-repeated question, "What shall we do?" No one has answered it—no one can. Mr. Ruffin's sheep will not save us, at least in this part of the country. Let every man in the South, who loves his country, read and ponder and act on the last paragraph of Mr. Willoughby Newton's first letter in the July *Planter*. Let us reduce our surface; cultivate highly and thoroughly, but on a much smaller scale, all of the customary crops; set our lands in grass as rapidly as they can be made to bring grass; adopt, as far as practicable, the valuable ideas contained in Mr. Mott's article, No. 6; increase our stock of all kinds slowly and cautiously; spend our money on domestic manufactures, and be strictly economical in our family expenses; and at the end of the year be sure to *balance our accounts*.

Very truly your friend, FARMER.

Granville county, N. C., July 27, 1868.

Peruvian Guano on Wheat—Large versus Small Applications.

Last fall I seeded broadcast twelve and a half bushels of wheat on ten acres of land, and applied at the time 1,975 pounds of Peruvian guano. I also seeded, with a drill, twelve and a quarter bushels upon seven acres. Upon the latter I sowed broadcast 200 pounds of Peruvian guano per acre, and drilled 100 pounds more with the wheat. After the wheat came up on the seven acres, I sowed a bushel of plaster and a bushel of ashes per acre.

Result.—From the ten acre lot I made 74½ bushels of wheat (by measure;) from the seven acre lot I made 105½ bushels. The wheat from the first lot weighed 61 pounds per bushel; from the second, 64½ pounds. I have a fine stand of grass on the seven acres; not much on the ten acres. I shall this fall try 200 pounds of Peruvian guano and 200 of bone dust per acre.

P. S.—I should have stated that both lots were very thin land—would have hardly made seed without guano. The wheat was "Roland." W.

Hedging in the South.

There is a great difference between hedging to the north and to the south of Mason & Dixon's line. To the north of that latitude, the choice of plants suitable for the purpose is quite limited. Not so to the south. The farmer in the South, at least, requires a plant for hedging purposes, that *should* be, not *must* be, regularly pruned and clipped. A plant that *may be* reclaimed and brought again into usefulness and good shape, even after years of neglect. A plant easily propagated; which will transplant well; is not too choice in the kind and quality of soil in which it will grow and thrive, and make a *thorough fence;* that will not *sucker*, even though its roots may be cut by the plough; and which—unlike at least one of those most earnestly advocated in the North—will not utterly exhaust the soil for many yards on each side of its line. We do *not* want a plant of a vigorous and persistent *upright* growth; and which, left to itself, becomes in a few years a good sized forest tree. But one of a partly trailing and pliant, or horizontal habit; with wood flexible, yet strong; and well armed, and protected by sharp and firmly attached, robust thorns or prickles; which will bear close interlacing, so far as that practice may be deemed necessary; and afterwards admit of being easily kept in good shape. We want a plant, too, which *has been* employed for the purpose successfully, and for many years; and which can be recommended without any doubts, provisos or conditions. Evergreens are, by all means, to be preferred. They afford shelter to crops and to birds; and give life, variety and beauty to the landscape at the season of the year when most needed. The South possesses, and has thoroughly tested, *to entire success*, several such plants. These are, the Cherokee rose (*R. lævigata*), Chickasaw rose (*R. bracteata?*), Alba odorata rose (*Macartney* of Paul & Parsons; *Microphylla* of Rivers), and the Evergreen hawthorne (*Cratægus pyracantha*), with, in the extreme South, certain native plants, not necessary to discuss in this article.

Why ignore the Osage Orange, or Bois d'Arc (*Maclura aurantiaca*), so favorably spoken of and extensively planted South? it will be said. Because, though widely tried with us, it has been almost always a failure. It is a deciduous *tree*, of robust, upright habit; which *must* be regularly clipped at least once a year; and that after several years of laborious and skillful treatment and training to lay the foundation of a fence. Look over that excellent and interesting volume of Dr. Warder on hedges, which every one

who even thinks of hedging, no matter with what, should carefully peruse. All is there said in favor of the Maclura that can be said. And we are assured that good hedges and *fences* can be *and are* made of it. Yet, at the same time, we find many such passages as the following:

"Firmly convinced, as I am, that the Maclura is everything that I have claimed for it, as a hedge-plant, it may be asked, by those who are unwilling to take anything for granted, why are there so many failures in the attempts to make hedges of this plant, in all parts of the country?"

"And it is no wonder there are doubters; since a large majority of persons who have been induced to plant the Maclura, under the impression that the hedge would come of its own accord, have failed.'

"Numerous failures occur from mismanagement in the preparation of the ground, assorting, handling and setting the plants, and neglecting to replant to fill the vacancies at the proper time;" "from the wide distance at which the plants have been set;" from a "neglect to *cultivate* and *clip* the hedge," &c., &c.

The fact is, that the *failures* are acknowledged as being numerous. Indeed, "Col. Medary, of Ohio, stated in his paper, 'that he had, reluctantly, almost come to the conclusion that hedging was a specimen of enclosure that was of doubtful economy.'"

Hundreds of miles have been planted in the Southern States by professional hedgers from the North or West, and what are these hedges now? Mere tangled, useless lines of trees, totally irreclaimable as fences. But let the traveler in the South tell what he sees there! Thousands of miles of *thorough fence* of Cherokee and other roses, and long lines of Pyracantha! Not all that they ought to be as hedges, by any means. But, although overgrown and spread out over a great breadth of ground, they are yet *fences;* and *can* be reclaimed, brought within bounds, and form again beautiful lines of hedge, should the time ever again come when there will be a *working* laboring class in the country, sufficient in number to perform such work. Here are no *failures.* Every *hedge* is a *fence.* No especial skill has been required to make it so. I do not advocate, be it understood, the abandonment of a line of hedge to nature's guidance and control; but insist that every hedge, be it composed of what it may, *should be* thoroughly kept, clipped and dressed. I only urge that since, in only too many cases, this *can not*, or *will not* be done, then let us select a plant that *may* be neglected somewhat, and yet form an effectual barrier.

I claim to have a very thorough knowledge of this subject as

practiced North and South, and in Europe; and have just completed a little hand-book on the subject, of which you will receive copies when published. The Cherokee rose is more extensively employed in hedging in the South than any other plant. Many thousands of miles exist; and many more would have been planted ere this, had ruin not been brought upon us from which it will take many years to recover. It is undoubtedly a native of China, or at least of Asia; introduced at an early day, no one knows by whom; and the same may be said of the "so-called" Chickasaw. You will find the Cherokee described at p. 461, vol. 1 of Torray & Gray's "Flora of North America."

The first mention I find in any of the publications of an early day, is in the second volume of that excellent and pioneer journal, the *American Farmer*, vol. 2, 1820. And next in the 4th volume of the equally excellent and more thoroughly Southern paper, the *Southern Agriculturist*, of South Carolina, 1831, where is an interesting historical, descriptive, &c., article, by Stephen Elliott. Although strongly recommended as a hedging plant by the correspondents of these journals, like other good things in farmers' hands, it was long before it came into general use. Its habit is that of a rampant running rose; throwing out long and strong shoots, well armed with nearly straight, but sharp and strong thorns. Grows freely from cuttings; and under any fair treatment, will make a good fence in from three to four years. I recommend it for all thin, hill lands, pine woods, &c. In rich soils, and in creek and river bottom lands, its growth is too rampant. I can see no reason why it should not be *the* hedging plant for Virginia, as great degrees of cold as were ever experienced in that State did not affect it. In fact, unless my recollection greatly errs, I saw the Cherokee rose growing vigorously last summer at "Plynbinmon," the residence of General Tench Tilghman, on the Eastern Shore of Maryland.

I have no evidence that the Chickasaw rose is hardy so far to the North; but believe it will prove so to the south of Virginia and Tennessee. In habit it somewhat resembles the other, but is not so rampant; forms a close, dense outer surface; and is excessively thorny. It will better suit a richer class of soils than the Cherokee.

The Alba odorata I look upon as forming the perfection of a plantation fence. Parsons says it is perfectly hardy at Flushing, Long Island. I am not *absolutely certain* that he and I speak of the same plant, but think so. My plant was sent me by Rivers, many years ago, as the Maria Leonida (*Microphylla alba*) rose.

But I feel very confident it is the same with the Alba odorata of Paul and of Parsons. It is a free-growing, semi-running plant; evergreen, and with a remarkably rich, glossy, dense foliage, the young shoots being of a rich reddish tinge, which adds greatly to its beauty. It is *remontant;* blooming nearly all the spring, summer and fall; flowers double, creamy white, without any rosy tinge; of a very rich tea or apricot fragrance. The flowers do not always open well; wood hard and tough; thorns numerous, sharp and strongly reflexed. Any of these three plants will form a magnificent, beautiful and impervious fence, with *one-tenth of the labor* demanded for the Maclura! The last named of the three will not be too rampant even in bottom land.

But if an intending hedge-grower has made up his mind to put upon his hedge the amount of work demanded for the Maclura, then let him adopt the Cratægus Pyracantha. This is an evergreen hawthorn, with small, richly-dark green leaves; a perfect sheet of beautiful white bloom in its season; followed by a literal covering of bright coral-colored haws, which persist far into the winter. Its habit is dwarfish, yet robust; limbs tough, flexible; and with the dense covering of strong and short shoots which cover the limbs, horizontal in their tendency; thorns extremely numerous, strong and sharp. It is hardy at Germantown, Pa., and in Scotland.

In Louisiana and Mississippi are miles of hedge of this plant, as perfect as could be desired. Some which I know, planted in 1857–8, on the low-lands of Louisiana, back of Water-proof, were never clipped nor cared for, farther than to keep the weeds from smothering them, are now reported to me as being seven feet high, with seven feet of width—a fence so dense to the very ground, as to be impervious to even a small pig! It can be imagined, then, what a hedge can be made of it if regularly clipped! The Pyracantha requires rich land, and *should have* thorough tillage, and care and clipping. The hedge-row *must be* carefully and thoroughly prepared. If an old fence-row, let every brier, sprout, tree and vine be carefully eradicated; and the bed broken up to the width of from eight to twelve feet—the latter being best. If poor, give a good dressing of manure. Plough and harrow two or three times.

All four of these plants are propagated from cuttings. Here, in Texas, and in Southern Mississippi, we succeed best by planting in October or November. With you, in the more Northern of the Southern States, I should say plant in September, in beds which can be protected; grow one year there, and transplant the rooted plant into fence-row the following fall, or spring after. I prefer cuttings

of the roses of young wood, from eight to ten inches long; and insert three-fourths of that length in the ground. The cuttings of Pyracantha are necessarily short and slender, and should be always planted in nursery-beds, in a sandy soil, and protected by *mulching*.

Now comes a question in which I have always been at issue with nearly all hedge-growers; but in which I am much pleased to find that Dr. Warder sides with me. And that is, *distance of plants in hedge-row*. To discuss this subject fully, would occupy too much of your space. Although crowding the Maclura in hedge-row, in the North and West, even to reducing the distance to four inches between plant and plant, may be necessary with that plants there, as claimed by nearly all who have written upon it, it will not do in the South. And still less will it do with the plants here spoken of. The *plants* composing a hedge must have space to make a strong growth, otherwise the *hedge* will make a poor *fence;* and with those roses especially. If crowded, a growth of weak spray is the result; and the plant which *will*, here and there, gain the start upon its neighbors, will certainly choke them out, causing dead wood, which still farther weakens the hedge. Stout and vigorous shoots are needed from the first, to form the base of the hedge. Give the Cherokee and Chickasaw roses three feet between plants; the Alba odorata, two feet, or thirty inches; and the Pyracantha I prefer planting in double rows, thus: * * * * * * * *. The rows say sixteen inches apart; and the plants a like distance, or even two feet in rich land, in each row.

All hedges require to be worked and kept clean. Do no pruning the first year; but just before the buds begin to show signs of budding out in the spring—in Virginia; during winter, farther South—cut back the roses to within three or four inches of the main stem; and the Pyracantha as well. Plough, hoe, and dress up neatly. Once during the summer, let two hands go along the rose hedges, and moving backwards, lay up the long shoots *along* and partly *across* the row, pressing them down firmly with a forked limb in each hand. In the fall, repeat the operation; and again in the spring, cut back, leaving a base of say two feet. The following seasons, the same processes are to be repeated; adding at clipping, a little to the width of the hedge. When six feet high, and with a base of four feet, it may easily be kept to that; and is impassable to man or beast. The Pyracantha wants nothing more than to be kept in shape, allowing it to form its proper width of base gradually. If its long limbs are somewhat interlaced, as directed for the roses, its strength as a hedge will be, of course, increased.

Should the subject prove interesting to your readers, I may resume and enlarge upon it. Yours,

THOMAS AFFAECK.

Near Brenham, Washington county, Texas.

Letter from New Zealand.

To the Editor Southern Planter and Farmer:

Dear Sir,—Please receive the enclosed from our New Zealand correspondent, which I send for your readers, showing how greatly superior our advantages are to many who are more prosperous than we, while laboring with greater expense. If others less favorably circumstanced can *do well*, why cannot we do *better?* We *can*; we will if every one will resolve to *try*, and will *try earnestly*. *There is no place like home*, and we should all go to work, and with united efforts strive to accomplish much for ourselves and for our South.

Very sincerely yours,

MRS. WM. J. BROWN.

Buncombe county, N. C., August 4, 1868.

PROVINCE OF CANTERBURY, N. Z., February, 1866.

New Zealand, or this particular part of the colony, the province of Canterbury, is in many respects a most desirable country; but, like all other portions of the habitable globe, has its drawbacks and disadvantages. In the immediate vicinity of the principal towns the land is of an alluvial character, produces very good wheat, oats, barley, Irish potatoes, and artificial grasses. Further from these centres of population, the country becomes *patchy*, and it is safe to say that all of the good land within twenty miles of the coast has been purchased and is being improved. The government price is £2 per acre, free to select any unsold or unreserved land. No difficulty whatever in obtaining land at the government office, after you have traveled over the plains and found it. The expense of fencing is £1 per acre, and the same for ploughing, which brings up the price of a farm to about $20 per acre. This colony is justly considered the Britain of the Southern Hemisphere, so similar is it in appearance, climate and productions. When you know England, you have not much to learn about Canterbury, except, of course, the difference in population, wealth, &c. The population is now about forty-five thousand, including fifteen hundred miners, who have arrived this year at the newly discovered gold mines on the other side of the mountains. Wages of servants are high, and,

with few exceptions, the servants are not so good as your negroes. Female servants are particularly annoying, because there is such a demand for them by the small farmers for wives. I am now giving $150 per year to female servants; one is only a girl of fourteen years of age. To men I pay the current rates, $250 and $300, and to boys $100 per year. For extra labor by the day, $2.; by the week, $7.50. These rates are about current not only in this, but in all the other Provinces. Our government is not unlike that of the United States. There are nine Provinces on the two islands; each sends representatives to a general assembly, in proportion to population. The Governor is appointed by her Majesty, the Queen, for six years. The duties of the Assembly are almost the same as the United States Congress. Each Province has a legislature called Provincial Parliament, whose power is about like your State Legislature. The Superintendent, like your Governor, is elected every fourth year by the people.

If you can imagine a plain a hundred and twenty miles long and twenty miles wide, without a tree, but intersected here and there by rivers and creeks, you will have some idea of Canterbury. The mountains on either side are very high, and covered with snow all the year, which gives us summer in the plains and winter on the hills at the same time. We can sit in our front veranda and see three towns: Rangina, eight miles, Kaiapoa, ten miles, and Christchurch, twenty miles distant; and beyond them, the great ocean. The view is splendid, and was the main consideration in the location of the house. My farm consists of seventeen hundred acres of beautiful land, level as a floor, without an original tree upon it. I have it fenced and divided into fields, the smallest of a hundred and fifty acres, which I am putting in clover this year. Next year I expect to seed five hundred acres more in clover, to provide sufficient pasture for my sheep. I have now eighteen hundred head; some I imported from Germany, and some from Vermont, U. S. The land, in its native state, will not carry more than one sheep per acre, one season with another, but with artificial grasses, it is calculated that three sheep per acre can be carried. It costs £2 per acre to seed to English grasses. Very good sheep can be purchased now for £1 each, and it is calculated the wool from each at 5½ shillings per annum, and the increase at about 70 per cent., which, at six months of age, is worth 10 shillings, or half as much as the mother. Sheep-farming pays very well, but it requires so much capital. I really believe that with the capital necessary to commence sheep-farming in New Zealand, *much better* might be done,

and infinitely more comfort derived, from an investment in the United States. I often wish that I could transport my farm and stock to Western North Carolina. In all my travels, I have never seen a land so bountifully blest by nature as that portion of the old North State. Her pure, sparkling waters I have never found, but badly counterfeited. Nothing can be done here with less than ten thousand dollars to begin with, and to get a good start it requires twenty thousand. I would not advise any one to leave America to come here to farm. The most a farmer can do here is to produce enough to keep his family, pay servants, and make a few improvements. His profits will consist in the enhanced value of the land in a few years. I have no partiality to cattle, and only keep one cow, for which I paid $150. She has been milked seventeen months, and still supplies us with three pounds of butter per week, and a large supply of milk. I have about fifty turkeys, white, black and yellow; chickens without number, of two highly prized kinds; the most splendid geese, and a pair of extremely handsome pea-fowls. Have large numbers of the common fan-tail and tumbler pigeons. Last month I obtained an experienced gardener from Philadelphia, Pa., and am now having my vegetable garden and ornamental grounds put in order. I heartily wish it were practicable to obtain from America some of its fine forest trees, such as walnut, hickory, and others. The ash, elm and oak we get from England in large quantities. I have some chestnut trees that I imported from England which are growing finely, but their foliage is perfectly white. We have an Acclimatization Society here, whose peculiar work is to introduce not only birds and animals, but trees and plants, and exchange the same with foreign contributors. We can successfully grow turnips, carrots, parsnips, peas, beans, rhubarb, asparagus, cabbages, lettuce, onions, and very fine Irish potatoes. Sweet potatoes do not do well here. I have grown Indian corn on my farm, the first introduced in New Zealand. This is a fine country for peaches, apples, plums, cherries and pears. Cur rants, gooseberries, raspberries and strawberries grow to perfection Indeed, every fruit and vegetable common in the Northern States and in England are here in great abundance, considering the age of the colony. I would like to have the blue gum introduced into the States, and when I can get the seed will send you some to try it. It is a singular tree—never sheds its leaves, but annually sheds its bark; is a native of Australia, and is used for hedges. I want very much to get the chinquepin, and particularly the sassafras and cranberry, which would be invaluable here.

June, 1867.—All my wheat, oats and barley I have stored at Kaiapoa, our shipping port, waiting for better prices. Wheat at 3s., oats 3s. 6d., and barley 3s. 6d. per bushel is not a remunerative price. I have just finished storing a very large root crop of carrots, mangol and turnips, which my pigs and other stock will consume before spring.

Perhaps you would like to hear something of the ladies of this part of the world, their amusements, &c. There are many accomplished and beautiful ones, but none to the manor born. They will compare favorably with their sex in any part, either in accomplishments, appearance or taste. Their amusements are rather of a domestic character, in consequence of the absence of many public places of recreation. Occasionally there are balls and pic-nics got up expressly for them, which are really splendid, and proportionally expensive, as the husbands can tell you without reference to their ledgers. The fashionable stores are well patronized by the ladies, and it is here they are to be seen in goodly numbers in the afternoon. In short, the ladies of Canterbury are very much like their sex in all civilized places—dress, flirt and marry, as is the custom elsewhere. It is singular that here, as well as with you, the widows never fail to catch a husband when they want to. With you they are doubtless too numerous to mention, but in Canterbury they are exceedingly scarce. The ladies here are greatly in the minority; with you, greatly in the majority; consequently, the chances of marriage are in exact proportion. This is not mentioned by way of inducing any to migrate to New Zealand.

There are plenty of professional men in Canterbury. Only a first-class barrister can succeed well. There is an immense conveyancing practice here, which is the principal source of income with the profession. Mr. ———'s practice is about thirty thousand dollars per annum, but he is a good barrister.

If a person were to form a connection in New York or Boston, and open an importing house here, he might do well by sending wool to the United States in exchange for merchandize.

Christchurch is our seat of government, and is a flourishing place. It is only eleven years since it was first laid off for a town, and it will now compare with some of your old cities in point of public improvements. The government house is a handsome gothic building, costing four hundred thousand dollars. Some of our church edifices are very fine. Our principal streets are beautifully built up, and our fashionable stores are such as you have in some of your large cities in the States.

A gentleman, a retired merchant here, has a residence built after the style of one on the Hudson river, at a cost of twenty-five thousand dollars. It is complete, with a handsome conservatory, billiard room, &c., &c. The grounds are beautiful; have an artificial stream, from two artesian wells, with fish and swans. There is an astonishing amount of wealth and luxury here, but we are deprived of many of the good things which you enjoy in the States.

——— ———.

Latakia Tobacco.

The following method of curing this variety of Tobacco has been handed us by Mr. E. Cunningham, of Powhatan, who has been very successful in its culture:

"Pull the lower leaves as they begin to yellow, split the stem of each leaf, and string the leaves on small sticks. When first pulled, run the sticks close until the leaf turns yellow, say in four or five days; then hang the sticks about five inches apart, until the stem is fully cured. Hang in the sun every day, and keep from wet weather. Leave four lower suckers, pinch out the bud, and leave four or six leaves on each sucker, which will ripen in two or three weeks. Split the stems of the suckers, and hang on sticks. This Tobacco should be planted on rich, light land, to give it size.

The Bots in Horses.—Bots, bots—confound the bots!—In one sense, surely, it is "the worm that never dieth;" for ten times a year some empirical recipe—and stale at that—travels the round of our agricultural exchanges, for the infallible destruction of this vivacious creature. Would it not be as well to ascertain whether the bots do injure the horse, before drenching him with all sorts of nostrums—all more or less injurious and absurd? For our part, we do not believe that this worm injures him in the slightest degree, and in this opinion we are sustained by Youatt—the very highest veterinary authority. We remember a discussion among some artillery officers on this very subject, in the month of March—just before the evacuation of Centreville. Half a dozen dead horses were opened, and the stomachs of all of them were more or less eaten into and riddled by the bots, and yet no one claimed that these animals died of the bots. The fact is, the stomach of the horse is the natural habitation of the insect. If the horse dies, the worm bores through the stomach in the attempt to escape a place no longer suited to its wants—precisely as the rat will abandon a falling house. It is preposterous to suppose that one of nature's noblest creations should be at the mercy of so contemptible an insect. We hope this question will be thoroughly ventilated at the next meeting of the Veterinarian Association, and set at rest forever.—*Field, Turf and Farm.*

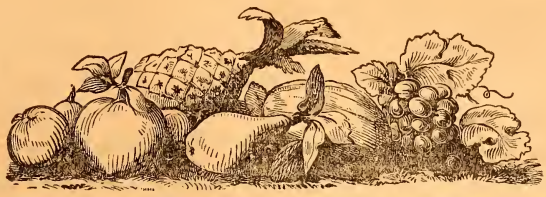
Buckwheat on Poor Land.

Some thirty years ago, when I lived in Canada, I had fat hogs, for I was a miller then, and you know that hog manure is very rich. I sowed a piece of ground with buckwheat for my bees, and on returning from the field, with some buckwheat in my sowing bag, I passed through the hog yard, and it looked so nice and mellow that I strewed on the buckwheat, shut the hogs in the pen, harrowed in the buckwheat, and let it grow for the bees. The result was that scarcely a bee touched the field blossoms, but the hog yard beat all for bees you ever saw. Well, I learned a lesson then—that is, if you want honey, the richer the land the more honey you will get.

Now when a person asks me how much buckwheat shall I sow for my bees? I ask him how much manure are you going to put on your land? Manure your white clover patch, currants, gooseberries, raspberries, in fact, every tree whose blossoms the bees are to work on. The richer the land the more honey the blossoms will produce. It is useless to sow buckwheat for bees on poor land. I saw a person last summer who had sowed the same piece of land to buckwheat for eight years in succession without manure, and he said for the last three years his bees have scarcely touched it. He concluded that they had gotten sick of buckwheat. But this year he ploughed up his cow-yard and sowed to buckwheat, and the way the bees worked on it beat all he ever saw. He took the hint from what I told him last summer. Is not this one great reason why so many people complain that their bees do not do as well as they did when the country was new, before they had skinned the land to death, western fashion? This skinning process is as bad for bee-keepers as it is for farmers.—*Elisha Gallup, in the American Bee Journal.*

The New Southern Fertilizer.—The Baltimore *Gazette* says that a company has been organized in Baltimore for the purpose of working up a large tract of remarkable phosphatic deposits which has been discovered in the vicinity of Charleston, South Carolina. This deposit extends for several miles along the Ashley river, and is composed of millions of tons of the remains of the ante-diluvian creation. This deposit is supposed to underlie, though at a great depth, the city of Charleston itself, and if it should prove what it is said to be, will be at once a most interesting contribution to cosmology, and a source of immense wealth when applied to fertilizing purposes.—*Richmond Whig.*

NAPOLEON III. STRAWBERRY.



Horticultural Department.

Description of Napoleon III. Strawberry.

Fruit large to very large, irregular, flattened, varying from oval to cockscomb shape; color handsome rosy-red, shading to darker red in the sun, and waxy-blush in the shade; flesh of snowy whiteness, firm, and of sprightly, high flavor, with a delicate aroma; the plant is very vigorous and healthy, with large, dark-green foliage, which endures the sun remarkably, and is very productive, in some localities exceeding even Wilson's Albany; flowers perfect. In season, it is later than the Wilson, succeeding it, and continuing long in bearing.

Transactions of the Virginia Horticultural and Pomological Society.

GRAPE CULTURE IN VIRGINIA.

The points involved in the consideration of this subject, to which I called the attention of the Society at a late meeting, were of a general character, and their elaboration mere hints to new beginners, as I took occasion at the time to designate them. I propose now to enter upon the details of *establishing a Vineyard.* The pruning, training, and construction of trellises, if I venture upon these departments at all, must be postponed to some future occasion.

SITE FOR A VINEYARD.

In our climate, where a serious obstruction to successful fruit culture is presented in our late spring frosts, and our lengthened season furnishes no pretext for a prolongation of the period of ripening even our latest varieties of the grape, I deem it important to select a western, and in preference, a northwestern slope. I should certainly recommend the avoidance of a southerly slope, preferring instead a table land. I am quite aware that this is opposed to the general preference, which is for south and southeastern expo-

sures. My observation, however, has taught me that our hardiest varieties of native grapes, under vineyard culture, have occasionally their first shoots injured, and sometimes killed, by late frosts; and that this evil is in direct proportion to the forwardness of the growth; and this early bursting of the bud and pushing of the tender shoot, is perceptibly hastened by a Southern exposure. I have also noticed that apricot trees, in yards on the northern side of buildings in the city, much more frequently escape the destruction of bloom and fruit by late frosts, than similar trees on the south side of buildings. Moreover, I think we fall into error in supposing that the greatest summer heat, and the most enduring, is necessary, or is even favorable, in our *cismontane* district, to the perfection of the grape crop. If it could be applied without cost, I should much prefer to have a muslin canopy spread over my vineyard for five hours, during the hottest days of our culminating summer heat. As this is impracticable, I would secure some moderation of the direct and intense rays of heat during that period, by a protecting slope to the northwest or north.

SOIL FOR A VINEYARD.

Next in order, and perhaps precedent in importance, comes the constitution and *underlay* of the soil best adapted to vineyard culture. Some of our hardiest varieties—Concord and Norton, and Clinton and Hartford, and some others—will do well in almost any soil, which has been deeply stirred, and which has not water actually standing near the roots; but there is no question that these, even, will only give their best results on such soil as the more fastidious varieties, such as Delaware, Diana, Herbemont, and many others demand, as an indispensable condition of yielding even tolerable returns. Such grapes require, as a first condition, a thoroughly underdrained, but by no means, necessarily, an arid soil. Its texture may vary from a gravelly loam, which is perhaps preferable, to a moderately stiff soil. The best of all soils, I presume, is such as contains an important proportion of the disintegration of primitive rocks; but any permeable soil, well drained, but not too dry, may be considered a safe base of operations.

SEASON OF PLANTING.

If there were two opinions on this point before the experience of our past season, I think the advocates of spring planting have scarcely a foot of ground left to stand upon—I mean of *dry ground.* The importance of abstaining from ploughing or otherwise stirring land when wet, or more than merely moist, can scarcely be over-

rated in reference to general agriculture. The rule is still more imperative when applied to fruit culture, where the product of an acre should yield ten-fold in value that of an agricultural acre; and the highest possible grade of preparation and cultivation is indispensable to that end. This can be much more surely secured by fall, than spring planting; and if an error should be committed, by stirring the soil when not sufficiently dry, in the fall, the freezing and thawing of the intervening season of rest, will restore the land to its natural texture. Moreover, in the fall we have not so many indispensable operations pressing upon us—it is not the general seed time for our gardens—and we have more time to devote to the perfect accomplishment of what we propose to do in the vineyard. And finally, beyond all this, it may be safely assumed that, in our region, an advanced growth, equal to a half season, is secured by early fall planting.

SELECTION OF VARIETIES.

The greatest obstruction, existing in all sections of the United States, to the rapid development of the grape interest, is to be found in the stubborn fact, that excepting the Norton in Virginia and the West, and the Scuppernong in the Cotton States (neither of which can be propagated in the ordinary simple method by planting cuttings in the open air), we have no single variety that has established a claim to the confidence of the public as a reliable producer of good marketable wine.

The Catawba, in the wine districts of Ohio, where it has most advocates, fails of a satisfactory crop two years out of every five. The Ives, which has been put forward with much confidence by its introducers as meeting all the requirements of an American wine grape, and is evidently growing in popular favor, is, nevertheless, yet on probation; and conflicting opinions of its merits are still held with equal tenacity. I am myself inclined to adopt it as promising to rank next in value, all things considered, to the Norton; and I recommend it to limited cultivation on trial by our growers, for wine only.

The Cunningham, a native of Prince Edward county, Va., and a producer of excellent wine nearly forty years ago in our own State, has, like many of our sons, gone abroad to build up a reputation in the West. While it has passed out of our notice here, Mr. Husman, of Missouri, gives it a high reputation as a wine grape; and it comes back to its native soil a stranger, and relying upon a distant, but very reliable endorsement, for its introduction into public favor here.

The Concord, worthy of all praise for its regular and healthy and abundant crops in any medium soil, and under any reasonably fair treatment, has yet to establish its reputation as a wine grape. It has not, however, been fully tested in Virginia; and the fruit is so much improved by our climate, that we may perhaps hope that the must will exhibit more satisfactory tests here than it has elsewhere—that is, in the North and West.

The Herbemont made delicious wine thirty-five years ago, and a quantity of it, under a Southern sun; and continues to exhibit that capacity, South and West, wherever it finds itself perfectly "at home." But it is very fastidious in the matter of "board and lodging;" and in my past experiments in several localities, I have not succeeded in meeting its requirements. As I esteem it, however, the most profitable wine grape in our whole list, *where it is exempt from rot*, I shall not reject it without a fair trial on a deep gravelly soil, made highly calcareous, and enriched with mineral manures only.

The Delaware would be only second to the Herbemont, if it could be relied on for fair and regular crops, even though it can never reach the latter in productiveness. The Iona has produced abundant crops, yielding wine of high character in some localities North and West; but in many more cases it has failed. Its friends assert that it has suffered, from unduly forced propagation from immature wood, in its early introduction. Perhaps this is so. It held its fruit bravely, and matured it thoroughly, in localities at the North last season (unprecedented for its dampness), where even Concord rotted. And so of others, which have done well somewhere, but none of which have succeeded everywhere. For myself, I have determined to try all hardy varieties, native and hybrid, that have borne satisfactory crops, and yielded anywhere within or above our latitude a grade of must capable of being converted into a sound wine. Any must that will barely float a fresh laid egg has this capacity, without the addition of sugar. Its adaptation to the public taste is another, and the all-important question. It may be hoped that some, at least, of such varieties will find themselves at home, and yield their best results in our section.

With the best information I have been able to collect from other growers, in addition to my own experience, I have adopted the following varieties, and in the following proportions, in establishing a new vineyard of four acres near this city, viz: Norton, one acre; Concord and Ives, each one-half acre; Iona, Creveling, Scuppernong, Herbemont, Delaware and Clinton, each one-quarter acre—

leaving a half acre for experimenting, on a smaller scale, with other varieties presenting evidence of merit; intending, after sufficient proof, to cut down such as do not give valuable results, and graft them with such as shall prove most valuable. Thus I hope to do something towards developing the fitness or unfitness of these varieties for wine making on our Southern soil; and I cordially invite others, who propose establishing vineyards, to hazard something in thus extending their list of varieties (according to the best information they can procure), and thereby increase the chances of demonstrating how many, and what varieties, of the present list of cultivated grapes, are worthy of extensive culture in our region, for the purpose of wine making.

AGE OF PLANTS.

Vigorous, fibrous rooted plants, of one or two years old at furthest, raised from fully developed cuttings of three or more eyes, wholly by out-door culture, in our Southern climate, are no doubt the most reliable class of plants for rapid development and early fruiting. Good plants, however, may be started under glass with single eyes, and raised in the open air; and, under favorable circumstances and expert management, may make reliable vines for vineyard planting, in the succeeding fall. And with some varieties—Norton and Delaware, for instance, which are very difficult to strike by out-door propagation, we must needs be satisfied with plants that are started under glass. But, as a single eye only is used in this process, it is still more essential, with this class of plants, that they should have been reared in a climate that admits of their being set out in the open air at the earliest period possible in the spring, and encourages their growth to the latest possible date in the fall. These conditions indicate a policy (which should be agreeable to all), of procuring their vineyard stock from the nurseries of our own region.

MODE OF PLANTING.

The high price of land, in districts from which we have derived our rules of planting the vine, has perhaps unduly influenced us in our apportionment of space, where the cost or market value of the land is a secondary consideration. The cost of a proper system of trellis being a serious item—about one-half of the entire cost of establishing a vineyard—it would be economical to give any increased space, rather in the distance between the rows, than in the distance between the vines in the rows. I would advise, then, to lay the rows off nine to ten feet apart, and plant the vines six to eight feet

apart in the rows, according to the natural growth of the varieties —the Concord and Norton and Clinton, representing the long-jointed rampant growers, and the Delaware and Herbemont the short-jointed, that may be trained to full bearing in a shorter space. The ground designed for a vineyard demands, and should receive, the most thorough preparation. This, however, can be fully accomplished with a turning plough, a subsoil plough, and a harrow. On the first ploughing, a good subsoil plough, with a good team, should follow immediately behind the turning plough, without missing a furrow, and stirring the soil in the bottom of the furrow as deeply as the team and implement can effect it. The subsequent preparation comprises the reduction, by the readiest means, of the whole area to a condition of fine tilth, and the throwing it into beds ten feet wide, cleaning out the finishing furrows as deeply and thoroughly as practicable—subsoiling again by two or three courses in the bottom of these furrows; and finally, throwing down with the plough, on this doubly subsoiled belt, sufficient fine, dry surface soil to form a suitable bed to plant the vine on. Raking this over with a fine toothed harrow perfects the operation.

On this bed, or on the side of a furrow to be opened along its centre, according to their bulk, the roots should be carefully spread out—not *bunched*—and covered to a depth of not over four or six inches with well pulverized earth, with which has been incorporated a handful or two of bone dust, or a quart of unleached wood ashes, or other suitable fertilizer, unless the ground is already in very good condition as to fertility. Liberal applications of vegetable and mineral manures, I deem necessary to successful grape culture, unless they are already present in the soil. Mineral manures, however well fermented, I think objectionable. They tend to the production of a spongy, plethoric growth, and are, perhaps, provocatives, to a considerable extent, of the diseases to which our native grapes are subject under cultivation; but from which they are exempt in their wild state, where they subsist exclusively on vegetable and mineral food.

The vine should be trimmed by removing close to the crown of the plant all but one cane, and that should be shortened to two or three eyes at most; and the strongest shoot only should be permitted to grow—the others to be removed when four or six inches long. A stout stake seven feet long, set one foot deep near each vine, will furnish all the support that will be required during the two first seasons of growth; and supposing that all that has been done thus far has been well done, the vineyard is established.

During the first summer's growth, I would not, in any manner, restrict the growth of this single shoot or its laterals; *but no other shoot should be allowed to grow.* An important end is to force the entire energy of the plant into one channel, to secure the production of *a single robust cane;* and this cannot be accomplished, if the young vine is permitted to assume the stature of a *bush.*

There are so many modes of training and pruning the grape vine, and so many intelligent advocates of several widely differing systems, that my limits will not admit of their discussion; and I cannot say more on this subject at present, than that I have for myself, after the fullest consideration and investigation, aided by my own experience, determined to adopt for my own operations the plan known as the double tier two arm system, as a general practice. For self-instruction, I shall practice, on a limited scale, other modes; and I commend this policy to all. Assuredly, in grape culture, it is a wise maxim to "prove all things, and hold fast that which is good." And it is certain, that whatever system of training and pruning may be adopted, it must be adapted, by extension or contraction, to the habits of particular varieties. The best results cannot be secured—they must be defeated—by restricting the rampant growers to the limits apportioned to those of naturally moderate stature. The announcement of this proposition will of itself suggest the necessity of intelligent and attentive superintendance. The habits and requirements of the different varieties must be comprehended and administered to; and while this involves no abstruse science, it requires observation and reflection and judicious execution.

I cannot appropriate my closing paragraph to a better purpose than the earnest enforcement upon new beginners of the indispensable necessity of deciding upon some fixed system of training and pruning before, or at the time of planting the vine; and at once and unremittingly, subjecting it to the discipline necessary to keep it within conformity to that system, whatever it may be. So fully am I impressed with the importance of this policy, that I should augur better results from a faulty system strictly enforced, than from a better one, in theory, imperfectly practised; and adopting the maxim of Pope in reference to governments, conclude that

"The system that's best administered is best."

JOHN J. WERTH.

Never work within doors when there is anything to be done without.

Notes on Some of the Vineyards of Virginia.

On a hasty trip through the mountains, we had an opportunity of noting the progress of some of the young vineyards, with which we hope soon to see our State abounding, and nothing has given us more sincere pleasure than to witness the eminent success which accompanies the culture of the grape.

Turning their attention, as our people did, at the close of the war, to the cultivation of fruit, with but a very scanty supply of information and with still less experience to guide them, it would not have been surprising had they met with many discouragements and failures at the outset. Such, however, is not the case. The peculiar adaptability of our soil and the congeniality of our climate to the production of fruit, especially of grapes, have more than compensated for lack of knowledge and experience, and we find the vineyards laden with fruit of the finest quality.

Stopping at Charlottesville for a day, we visited the establishment of the Messrs. Hotop, situated about three miles north of the town on the bank of the Rivanna river. Here the Delaware is growing luxuriantly, and three year-old vines are bearing the finest bunches of fruit. It is worthy of note that the soil upon which they are produced is a heavy clay, (the peculiar red clay of Albemarle,) highly fertilized with bones and stable manure. On grey, gravelly soil, not more than one mile distant, (on the same farm,) this variety does not flourish at all, while the Norton, Concord and Ives do very well. Owing to heavy rains at the time of the blooming of the Concord, its fruit did not set well, and the singular fact was presented of this prodigious bearer, producing less than any other variety. The Messrs. Hotop are devoting energy, time and capital to the grape business, which will speedily give them one of the largest and most profitable vineyards on the continent. They are eminently practical and observing men, and we hope they will favor the public with the results of their observation and experiments.

At Staunton, Major Jed. Hotckiss, (author of "Notes on the Wine Belt of Virginia,") to whom the State is so largely indebted for the active interest he has taken in the development of this important resource, has a magnificent hill-side of Catawbas, in full bearing. As yet, mildew nor rot has come nigh him, and he is entirely satisfied that, in his section, the Catawba will do well, and, consequently, is *the grape* to cultivate. He must take the Norton with it, and then, with his sparkling Catawba and glorious Norton,

he may enjoy the red and white, dispensing with the blue (and the blues).

At Lexington, Mr. E. S. Tutwiler is succeeding with all varieties—Catawba, Isabella, Norton, Delaware, Concord, Ives and Herbemont—they thrive, and he hardly knows which does best. *We know* that his wine is magnificent, no matter by what name or color it is called. By allowing his grapes to mature fully, he makes sweet wine without the aid of sugar, and he is reaping the reward of his skill at the rate of from five to eight dollars per gallon.

At Salem, Roanoke county, the Messrs. Ribble have twenty acres of Catawba, heavily laden with fruit. Here, however, are some signs of rot, and the Messrs. R. are not certain that they can make the Catawba profitable. We advise them to try Norton and Delaware. The first of these is sure, the second promises very well.

Leaving the great Valley, we cross the Alleghanies, where the people are just awaking to the value of the grape, and truly they ought to arouse themselves. Such magnificent locations, and such soil for the production of the grape, is rarely seen, and these mountain sides should be made to teem with vines and trees, bringing revenues not surpassed by those from the mines of iron and coal with which their bowels are filled.

Strawberries.

In the July number of last year, I gave the results of some experiments with several varieties of strawberries, promising that this year you should have accurate statistics as to yield, quality, &c., &c. Unavoidable absence during the greater part of the strawberry season prevented me making these statistics, and I can only give you, in general terms, the results of this year's crop, from data furnished by my foreman.

The varieties under culture were Wilson, Hovey, Russell, Jucunda, Triomphe de Gand, Peabody, Agriculturist and Napoleon. They ripened in the order they are put down. In size, the order was as follows: Russell, Agriculturist, Triomphe de Gand, Napoleon, Jucunda, Wilson, Hovey, Peabody.

In yield: Russell, Wilson, Peabody, Napoleon, Agriculturist, Triomphe de Gand, Jucunda, Hovey. In flavor: Triomphe de Gand, Hovey, Agriculturist, Russell, Jucunda, Napoleon, Peabody, Wilson.

It is but proper to say that they were all grown on light soil, which will account for the poor yield from both Jucunda and Hovey.

These should be grown only on heavy soils. As a market berry, Wilson is still first on the list, because of its early maturity, firmness and fruitfulness; but for flavor, it well deserves Mr. Meehan's epithet of "miserable." But how he can thus speak of the Triomphe de Gand, (see August number of "Gardener's Monthly,") I can't understand. I find its flavor unequalled; but it lacks firmness.

For combination of firmness, size and flavor, the Russell is decidedly first with me, and could it be persuaded to ripen a few days earlier would be invaluable.

The trial of the Napoleon was a very imperfect one, the plants being young (last spring's planting). It is a most vigorous grower, and may be very useful as a late berry.

The desideratum for our people now is a berry as early, firm and prolific as the Wilson, with, to say the least, a slight approach to sweetness, a quality of which the Wilson is not only void, but for which something of the acidity of vinegar has been substituted by nature.

In this connection, I may say that I have uniformly had more success with strawberries planted during the months of September and October than with those planted at any other season, and would advise your readers to prepare their grounds and plant at once.

M.

A New Wonder.

At Lexington, a few days since, we were invited to the garden of Captain Moore to examine what our friend, Colonel Werth, would call an "*impossibility*," in the form of an apple growing on a grape vine, not grafted, nor budded, nor any such thing, but simply an apple growing on the stem of the vine. The apple, which is perfect in form, emanates from the vine at the foot of a leaf stalk, where there would have been a bunch of grapes had not the apple taken its place. A close examination revealed a remnant of the bloom of the grape, at the point of union of the fruit with the vine, and the theory we formed was that the grape was fertilized by the pollen from an apple tree, which overshadows the vine; but the strange part is, that apple pollen should be received by grape stigmas.

The Professors of Natural Sciences at Washington College are watching the development of the stranger, and whenever it falls, either upon or before maturity, they will dissect it, and ascertain what its internal structure is.

Norton Grape for Red Wine.

We make the following extract from the report of the committee on the culture and products of the vine, appointed by the United States Commission at the Universal Exposition of Paris, 1867. Elsewhere in the report the Norton is instanced as the American variety eminently calculated for the production of red wine, and we urge upon our people the production of this class of wine.—Ed. Southern Planter and Farmer.

"Red wine is much less heating, much more tonic, much less exciting to the nerves, much less intoxicating to the brain, and its effects more enduring than white wine. As we of America are, by reason of our dry climate, as well as from moral causes, more excitable, both from brain and nerve, than the Europeans, and at the same time much oftener in need of tonic diet, and our summer heats are so much more intense than in the winter latitudes of Europe, all the above considerations should have peculiar weight with us. So highly, at least, do the French people appreciate them, that they consume now little white wine, and it bears always a lower price in the market than red of equal quality. To the general consumption of this drink intelligent Frenchmen are apt to attribute the fine health of their peasantry, as well as their habitual gaiety and habitual temperance. (The habitual use of *whiskey* has quite another effect.) An American gentleman, for many years residing in France, and for a time a professor in one of the universities, affirms that the greatest longevity is among those people who take red wine three times a day and abstain from both tea and coffee. When Americans consult French physicians, three times in four they are ordered to drink red wine as an habitual beverage; and one of the commonest daily events among Americans residing in Paris is the cure of an obstinate dyspepsia by the same simple remedy, even in the unhealthful air of that city.

Trucking and Truck Farming.

NO. I—SWEET POTATOES.

Raising the Plants—Preparation of the Bed. With a spade or other implement dig out the ground to the depth of about two feet, and of any size that is wanted, and be sure to select a warm, dry place with a southern exposure if possible; then take some good stable manure and spread it to the depth of a foot, if eighteen

inches the better; then take some sand or sand ground and spread it over the bed about an inch deep; take the potatoes and place them on their sides as near as possible, without touching each other; then spread some good sandy earth on these, as evenly as possible, to the thickness of three or four inches; the next thing to do is to keep the bed dry until they begin to show themselves through the ground, when the bed should be kept wet all the time, but, at the same time, care should be taken not to wet the bed too much. From one bushel of seed we generally raise 2,500 plants or sets, or sprouts as the New Jersey truckers say. It takes from 6 to 7,000 to plant an acre. We make the bed from the 18th to the 25th of March; but I suppose, in Virginia, that you can make it a week or two earlier. Sweet potato plants sell here from thirty to forty cents per hundred.

Cultivating and Preparing the Ground for Planting. Select a dry, loamy piece of ground, and plough it about the 10th of April, harrowing it thoroughly, then draw furrows through it about three and a half feet apart, spread twenty-five cart loads of manure to the acre in the furrows so drawn, then throw the ground on the manure from both sides making a ridge; pull the plants as soon as wanted, and steep their roots in water, and then they are ready to plant. One boy can drop plants as fast as two men can set them out. A hole is made with the hand and the plant inserted, and the ground firmly pressed around the roots. We plant them from sixteen to eighteen inches apart in the rows. We plant from the 20th of April to the 1st of May, as the plants become large enough.

Cultivating and Hoeing. When the potatoes have been planted about two weeks hoe the rows down; then, in two weeks more, they should be ploughed, harrowed between the rows and dressed with a hoe. We generally take a stick and turn the vines of the rows together, thus making a bed. In about two or three weeks more they should be gone over as before, thus making three times that they should be ploughed, or rather tended, to make them grow and produce a paying crop.

Marketing, Prices, Amount per Acre, &c. In marketing sweet potatoes, as in marketing anything else, when they are nicely packed, they will sell, as well as look better, than if packed in a slovenly manner. To look nicely they should be wiped off with a dry cloth, assorted in two sizes, and packed in baskets or barrels with care. If they are disturbed much they will sweat and rot—the least they have to be moved the better. For this purpose, barrels or baskets, which ever may be used, should be taken out

to the field, and the potatoes sorted, packed and shipped at once, or put in a room that is dry and of medium warmth, just warm enough to keep from freezing; but be sure and not move them until they are shipped. When sent to market early in the season they bring from $1.50 to $2 per bushel. One hundred and fifty to two hundred bushels of potatoes on the right kind of land, well manured, is not an unusual crop for one acre.*

DAVID Z. EVANS, JR.,

Town Point, Chesapeake City, Cecil county, Md.

Manuring Market Gardens.

All successful market gardeners agree that it is useless to grow good crops, without a yearly application of manure in large quanties. *Henderson, in his Gardening for profit*, says:

"It is a grave blunder to attempt to grow vegetable crops without the use of manures of the various kinds. I never yet saw soils of any kind that had borne a crop of vegetables that would produce as good a crop the next season without the use of manure, no matter how rich the soil may be thought to be. An illustration of this came under my observation last season. One of my neighbors, a market gardener of twenty years' experience and whose grounds have always been a perfect model of productiveness, had it in prospect to run a sixty foot street through his grounds. Thinking his land sufficiently rich to carry through a crop of cabbages without manure, he thought it useless to waste money by using guano on that portion on which the street was to be, but on each side sowed guano at the rate of 1,200 pounds per acre, and planted the whole with early cabbages. The effect was the most marked I ever saw; that portion on which the guano had been used, sold off readily at $12 per hundred, or about $1,400 per acre, both price and crop being more than an average; but the portion from which the guano had been withheld, hardly averaged $3 per hundred. The street occupied fully an acre of ground, so that my friend actually lost over $1,000 in crop, by withholding $60 for manure. Another neighbor, with a lease only one year to run, also unwisely concluded that it would be foolish to waste manure on his last crop, and planted and sowed all without; the result was, as his experience should have taught him, a crop of inferior quality in every article grown, and loss on his eight acres of probably $2,000 for that season."—*Colman's Rural World.*

* Those making inquiries will please make them through the "Southern Planter and Farmer."

Wine Making.

Mr. Tucker makes the following statement as to the manner of converting the grape into wine, at Cincinnati, Ohio:

"The process of wine-making has been so often described that a good outline must here suffice. The first item is *stemming;* a cask is used for this purpose, having a removable head, perforated with holes an inch in diameter, beveled to a diameter of two inches on the under side. The clusters are placed on this head, and the berries worked through, leaving the stems behind. The fruit is then crushed and transferred to the press as quickly as possible—the least delay and exposure to air being essential to the Catawba, and, as I understood, with any light-colored varieties here tested, as a general rule. The crusher is like a large coffee mill, and breaks the berries without cracking the seeds. The press is a wooden one, worked by a screw, with a wheel and pinion attachment to increase the power. The must flows through a strainer into the receiving tub, from which it is at once taken to the cask, where it passes through its first fermentation. The Longworth Wine House can express from fifteen hundred to two thousand gallons daily.

"The casks containing the must are filled to within say four inches of the top and closed with a bung containing a bent tube, the outer end of which stands in a vessel of water, so that the gas is free to escape without any admission of the outer air. Here fermentation takes place, and though its most violent stages are passed through in a fortnight or three weeks, the casks remain unclosed until December, or for two or three months after pressing, when they are filled to their entire capacity with wine of the same vantage and closed tightly. It is needless to say that the casks, and indeed every part of the apparatus, are cleansed before use, and kept scrupulously clean throughout.—*Gardener's Monthly.*

Orchards.—Keep the trunks and limbs of the fruit trees clean and in a healthy condition. If they are scabby, mossy, or otherwise diseased, scrape them well, and apply the often recommended mixture of whale oil and soft soap. As a preventive of insects, and of the borer, particularly, substitute a small quantity of coal oil (kerosene,) for the whale oil. Cut all black knots from cherry and plum trees, and burn them. Cherries, apricots, plums and pears may be budded early in the month.—*Md. Farmer.*

Household Department.

Bread and Bread-Making Scientifically Considered.

Bread is the staff of life. Man does not live by bread alone, but he cannot live without bread, or a substitute equally nutritious. As an article of consumption, it is universally used in some form among both civilized and barbarous nations; and the antiquity of bread-making may be traced to the earliest dawn of history. We are told that Abraham, at the appearance of the angels, said to his wife make ready three measures of fine meal, to knead it, and to make cakes upon the hearth. In Northern climates, bread is made of rye, and barley flour, and oat-meal; while rice and Indian corn are used for the same purpose in the warmer regions of the torrid zone. But in nearly all the countries situated in the temperate zones, wheat is the great staple of commerce, which supplies the civilized world with flour, from which bread, in all its varieties and forms, is made and sold to consumers.

The wheat mostly used in the United States for the manufacture of flour is the *Triticum hybernum*, or winter wheat, with its numerous varieties produced by cultivation. It belongs to the natural order, *Graminaceæ*, or grasses, which, although the least showy, are the most important plants of the vegetable kingdom; for they not only furnish bread for the use of man, but they also constitute the principal food for the support of cattle, and they thus indirectly supply us with meat.

Wheat is generally sown early in the fall. It sprouts up in grass-like form, and its vigorous vitality successfully resists the cold of winter, especially when partially protected by a covering of snow, which imparts to it strength and substance by keeping the ground mellow and saturated with moisture. It is a hardy biennial, and nothing can retard its growth and development except some diseases, or fungus excressences, produced by a peculiar state of the atmosphere, before it reaches its perfect state of maturity. It is harvested from the middle of June to the middle of July, and when perfectly sun-dried, it is ready to be thrashed and transferred to the mill, to be transformed into flour, of which it generally yields about 75 per centum.

Wheat flour, though capable of producing the best unfermented bread, is the only material from which fermented bread can be made

that combines lightness with sponginess, and which, being at the same time sweet and agreeable, is easily chewed and extremely digestible. The primary elements of wheat flour are: oxygen, hydrogen, carbon and nitrogen; its constituent organic elements are: starch, sugar, gluten and water, with a small quantity of albumen, caseine and fatty and oily matter.

The quantity of gluten in wheat flour is from 10 to 24 per cent., and as it contains this substance in larger abundance than any other farinaceous article, it is the most nutritive of all cereals, in consequence of the nitrogen of which the gluten is in part composed. Gluten is tough, elastic, tasteless, insoluble in water, and of a gray color. It is obtained from wheat flour by forming it into a paste, and washing out the starch by means of a constant stream of water. Without the presence of gluten, bread cannot be light and spongy. Its extreme tenacity prevents the escape of the carbonic acid, eliminated by fermentation, which swells the mass of dough, forms vesicular cavities, and gives to bread its elasticity and spongy appearance.

The most speedy mode of producing fermentation in bread, now in use, is by means of yeast, which is the frothy scum rising to the surface of beer when undergoing fermentation, and is manufactured on a large scale in yeast breweries. Yeast, when mixed in small quantities with the dough, readily produces vinous fermentation, by combining a portion of the carbon and oxygen of the starch and sugar, and forming carbonic acid, which, as already stated, is retained in the bread by the tenacious consistence of the gluten. If the fermentation continues longer than necessary, too large a quantity of starch and sugar becomes decomposed, and the mass will have a tendency to pass into the acetous fermentation, in consequence of which the bread will be sour.

When bread is made in large quantities from inferior flour, alum is sometimes added to make it firmer and whiter; but this adulteration may be easily detected by testing its power of absorbing water, which it will possess in a much smaller degree than unadulterated bread.

But wheat flour is not only the best material for loaf-bread; it is almost the only farinaceous substance that is well adapted for hard bread. Sea biscuits, as the French derivation indicates, are twice fired, or baked hard, so as to render them fit for use on protracted sea-voyages.

To make unfermented bread light and spongy by the production of carbonic acid, various chemical compounds have been used with

success, without injuring the taste or the quality of the bread. Carbonate of ammonia has been employed for that purpose; being volatized by heat, it escapes entirely, without imparting any taste or smell to the bread. Muriatic acid and carbonate of soda act very efficaciously by forming the muriate of soda, which is common table salt, while the carbonic acid is set free. One hundred and fifty grains of carbonate of soda and one and a half drachms of muriatic acid to two pounds of flour, is the proportion that will have the desired result. In this country cream of tartar and bi-carbonate of soda are much in use to make light unfermented bread. When an acid is employed, it must be in just proportion to neutralize the soda; if the former is in excess, the bread has an unpleasant taste; if the latter, it assumes a yellowish tint.

Light wheat bread, or loaf bread, is not only the most nutritive, because it contains more starch, sugar and nitrogen in the same bulk than any other vegetable substance, but it is also the most digestible. Its organic elements are readily dissolved by the gastric juice, and converted into chyme and chyle to be taken up by the absorbents, and to be changed into the constituent parts of blood. It contains no refuse materials that are difficult of solution, lie heavy on the stomach, and disarrange the digestive process.

We shall close this article with a recipe, which, if strictly followed, will certainly prevent dyspepsia. Take your meals at regular hours; let them be composed of well baked loaf bread in sufficient quantity to satisfy your appetite, seasoned by a slice of wholesome meat to suit the season, with a moderate share of one or two vegetables served according to taste; the whole to be washed down by a glass of cool water. The recipe will act effectually if the meat is the seasoning of the bread, not the bread the seasoning of the meat. In other words, be more gramnivorous than carnivorous; patronize the baker more than the butcher.

N. B.—We charge the readers of the *Planter and Farmer* nothing for this valuable recipe.

How to Peal Peaches.—As the time for putting up peaches will soon be here, we have procured, from a lady friend, the following recipe for pealing peaches, which we confidently recommend to our lady readers:

Take a kettle of very strong lye, and heat to boiling, take a wire cage, similar to a corn popper—fill it with peaches and dip it into the lye for a moment. Then into cold water. With a coarse towel wipe each peach, and the rind will peal off smoothly; then drop into fresh cold water, and the operation is complete. You need have no fear of injuring the flavor of the peach.—*Ex.*

THE SOUTHERN PLANTER AND FARMER.

RICHMOND, VIRGINIA, ... SEPTEMBER, 1868.

Editorial Department.

Agricultural Exhibitions.

THE BORDER AGRICULTURAL FAIR.

The Executive Committee of the *Border Agricultural Society of Virginia and North Carolina* have caused to be issued the following circular address, which fully explains itself:

The undersigned, appointed by the Executive Committee of "The Border Agricultural Society of Virginia and North Carolina," to prepare an address to the people of the border counties of these two States, on the importance of giving increased interest to the next Annual Exhibition of the Society, submit the following address to the public, and especially to the people of the border counties of Virginia and North Carolina:

FELLOW-CITIZENS,—The Executive Committee of "The Border Agricultural Society of Virginia and North Carolina" desire to call your attention to the importance of annual Exhibitions or Fairs, as an efficient agency in reviving the drooping spirits of our people and of promoting the agricultural interests of our Southern country.

It is believed that the first Agricultural Fair in this place, gotten up under much discouragement and with many forebodings of failure, has done much towards bringing about this most desirable result; and it is not doubted that future Exhibitions of the kind will contribute yet more to open the eyes of our agriculturists to their true interests, to lead them to change their system of cultivation, and to the use of the many improved implements of agriculture, by which a great saving of labor and expense may be effected.

The thousands of our countrymen assembled on that interesting occasion, were highly gratified by witnessing the improvements recently made in the leading agricultural and other implements, now so urgently needed by our impoverished people, to enable them to contend successfully against the difficulties which have recently been brought upon us, by the sudden and violent destruction of our long established and well approved system of labor; and their hearts have been cheered by the prospect thus afforded of lightening their burdens, by the introduction and use of these labor-saving machines.

They there saw improved stock of various kinds, the most luscious fruits, and many elegant articles, the handiwork of our ingenious, industrious and thrifty housewives, who are always foremost in every good work, thus proving themselves examples worthy to be followed by those who claim to be "lords of creation," all of which was encouraging in the highest degree, going to demonstrate that "there is life in the old land yet," and that nothing but energy and enterprise is needed to bring the two States which we represent to their former condition of prosperity and power.

We would caution you, fellow-citizens, against a desponding spirit—yield not to that feeling of despair so natural to persons in your down-trodden and suffering condition; but *look forward*, in anticipation of a brighter and a happier day.

We know the difficulty of persuading men in your circumstances to *struggle on in hope*.

> "We hardly value Hope that bids us *strive*,
> Yet Hope's the child of Faith, and Faith makes thrive
> Each *working soul* that works" *in earnest.*

Then let us work in earnest to retrieve our fallen fortunes. Let us endeavor, by industry, economy, and a careful observation of the system of management adopted by others, to regain all that we have lost, and even to become more prosperous than ever before.

The experience of the last two years must have convinced all, that there can be no profitable culture of the earth in the Southern States, without a thorough and complete change of our system of agriculture. *Old customs and old systems must give place to new, and we must adapt ourselves to our changed condition—we must be progressive.* We must learn the important truth that as iron muscles require neither food nor clothing, and demand lower wages, inasmuch as one man with them can do the work of five without them, we must introduce and use upon our farms all those labor-saving machines which the experience of others may recommend and our judgment shall approve—thus dispensing with all unnecessary and extra labor.

We must wisely adapt our crops to our different soils, and our manures to our crops. We must introduce the culture of other crops than we have been accustomed to grow, thus diversifying the productions of our farms, and so making them more profitable.

In short, we must resort to every expedient to make those productions exceed in value the cost of cultivation and the amount of capital invested.

No one can persist in the present system of operations, which in cost so far exceeds the actual profits of farming, without becoming hopelessly involved in debt. Our experience since the war, has forced upon us the unwelcome conviction that the cultivation of large farms in our former slovenly and improvident way, will absorb more than all the net revenue derived from our crops, and leave us in the condition of the unhappy Dutchman, who, having long employed a fellow-countryman as a farm laboror, was compelled every year to transfer to him a portion of his land ior pay for wages due. The proprietor soon saw that whilst *he was losing heavily* by the operation, his employee was reaping all the benefits, and he said to him: "Hans, you shall hire mit me till you puys all my land, den I will hire mit you till I puys it all pack again."

This will be our sad experience ere many years shall pass away, unless we change our system of labor, diversify our crops, adapt our crops and manures

to our soils and to each other, and avail ourselves of the use of the many labor-saving machines which are so well adapted to our present condition, and which, happily for us, have recently been brought within our reach.

Now, to facilitate all this is the province of agricultural societies and agricultural fairs.

May we not, then, confidently appeal to you to become life members of "The Border Agricultural Society," and to patronize our next Annual Fair, by the contribution of articles to be exhibited, that you may thus incite others to emulate the ingenuity and enterprise by which they have been produced.

Our next Annual Fair, for the exhibition of improved agricultural and other implements, stock, fruits, vegetables, household fabrics and other articles of manufacture, ladies' needle-work, &c., &c., will commence in this place, on Tuesday, the 20th of October next, and we earnestly invite our farmers, planters, manufacturers, mechanics and housewives to begin, at once, to prepare articles to be exhibited on that occasion.

Competition excites emulation, and emulation leads to improvement, if not to perfection.

We say to all, that you have it in your power to do much towards "removing the pressure" and dispersing the gloom which now hangs over us, and introducing a new era of prosperity to the suffering people of the South.

Will you, *can* you withhold your hands from an enterprise which produces such happy results?

We assume the responsibility of answering for you, "*No.*" We are confident that you will put your shoulders to the wheel and aid us in pushing forward the car of reform and improvement, and thus establish your claim to be ranked by your cotemporaries and by posterity, as benefactors of your race.

We are confident that this will be your responce to our appeal, and that you will make our next Annual Exhibition yet more successful than our last.

Although this address is intended specially for the people of Virginia and North Carolina, the committee hope that the farmers, mechanics and manufacturers of every other portion of our country will understand that *we invite their hearty co-operation.* We hope to receive from them many articles for exhibition and other evidences of their good will.

We take this occasion to express our regret that the publication of a complete list of the premiums awarded and the numerous articles of interest offered for exhibition at our last Fair, has been so long unavoidably delayed by the loss of a portion of the records. These, however, have recently been recovered, and the list will be published in full, in pamphlet form, in a few days.

We hope to avoid in future all such delays, and all other irregularities and mistakes, which occurred at our first Fair, and which grew out of our want of experience in such matters.

Wm. T. Sutherlin,
Thos. P. Atkinson,
Geo. Williamson,

Committee on behalf of the Border Agricultural Society of Virginia and North Carolina.

Danville, Va., June 18, 1868.

AUGUSTA COUNTY FAIR.

We learn from the *Staunton Spectator* that the first Annual Fair of the *Augusta County Agricultural Society* will be held at their grounds, near Staunton,

on Tuesday, Wednesday and Thursday, the 27th, 28th and 29th days of October next.

"We hope," says the editor, "there will be strong competition in every branch and class in the list, and that this exhibition will excel all others of a similar kind in other sections of the State. Exhibitions of this kind are calculated to do an incalculable amount of good in the rivalry they excite in the manufacturing and producing interests, and we feel confident that old Augusta can compete favorably with any of her sister counties."

The *Spectator* also contains a very comprehensive schedule of the subjects for which premiums are to be awarded, the amount of which is yet to be determined, except as to essays, experiments, &c., but will, in due time, be published. We are so much pleased with the enlarged and enlightened views which controlled the action of the Directory in framing their schedule, that we reproduce that part of it which relates to experiments, essays, &c., as showing that they do not regard exhibitions as mere pageants, but as a means eminently adapted to the dissemination of useful knowledge. We quote as follows:

BRANCH I.

Experiments reported in writing.

For the best and most satisfactory experiment upon each of the following subjects, reported in writing, a premium of $10:

1. On the effects of subsoil ploughing.
2. On lime as a manure.
3. On the question whether the effect of plaster is lessened after long use on the same land.
4. On the effects of bone (ground) guano and other concentrated or prepared manures.
5. On the comparative effects of two or more different kinds of concentrated and manipulated manures.
6. On the comparative advantages and economy of these prepared fertilizers as compared with barn yard manure.
7. On the effect of top-dressing grass or arable land with straw or other undecomposed manures.
8. On the influence of salt as a manure, and its effects in destroying or preventing the ravages of insects.
9. On the effects of pasturing wheat at any time between seeding and spring.
10. On the comparative advantages of feeding fattening animals, either swine or cattle, on ground and unground grain.
11. The comparative advantages and economy of feeding ground or unground grain to farm horses.
12. On feeding cooked and uncooked grain.
13. On housing, or otherwise sheltering cattle in winter, in reference to the thrift of the animal and the economy of food.
14. On the advantages of crushing and grinding the cob with the corn as food.
15. On the distance at which corn should be planted, and the comparative influence of drills and checks on the yield, the number of stalks to the acre being the same.
16. On the comparative advantages of drilling and broad-casting wheat, in reference to the acreable product.

SPECIAL RULE FOR BRANCH I.

The superiority of merit of two experiments, or series of experiments, claim-

ing the same premium, will be decided in favor of that one, presenting the most complete and extensive process of experiment, accuracy in the general proceeding, clearness in the report, and utility in the information conveyed.

Exact measurements of results will always be required where practicable, and necessary to a correct conclusion. But in many cases estimated products or results may be sufficient for arriving at correct conclusions.

CLASS I.—BRANCH II.

Essays or other written communications.

For the best essay on each of the following subjects, a premium of $30:

1. On the mineral resources of the county, describing the character, locality and extent of the minerals, together with such other information as may be of importance in their practical development.
2. On the water courses of the county, in reference to irrigation and the propelling of machinery.
3. On the forest resources of the county.
4. On irrigation, its advantages, and a general description of the practical operation.
5. On improving and enriching poor land.
6. On the accumulation, preservation, and application of barn yard, stable, and other manures of the farm.
7. On the insects injurious to wheat, corn and other crops, and the use of any known means for the prevention of their ravages.

CLASS II.

For the best essay on each of the following subjects, a premium of $10;

1. On the cultivation of wheat.
2. On the cultivation of corn.
3. On the cultivation of rye.
4. On the cultivation of oats.
5. On the cultivation of barley and buckwheat.
6. On pasture and grazing.
7. On hay-making generally.
8. For each one of the ten best communications, in writing, on any useful and practical subject (not enumerated above,) of agriculture, mining or the mechanic arts, a premium of $10.

SPECIAL RULE.

Essays on practical subjects must be founded mainly on the experience and observation of the writer, although information derived from other sources will not be excluded.

The award of superiority of any one writing over others on the same subject will be made in reference to its probable greater utility, and to the extent and thoroughness with which the subject is treated.

We are sorry to add that the money premiums are to be awarded only to citizens of Augusta, and as these are generally the *first* premiums, the effect will be to limit competition. We have no doubt but that this course is imposed upon the Executive Committee by the law of their organization; nevertheless, the effect will, we fear, be as we have indicated.—Ed. S. P. & F.

CENTRAL AGRICULTURAL SOCIETY.

We learn from the *Weekly Index*, Henderson, N. C., that *The Central Agri-*

cultural Society propose to hold their tenth Agricultural Fair on the 14th, 15th and 16th days of October next. The *Index* adds:

"Now we would urge our people—farmers mechanics and merchants—and our ladies, to be ready for the Fair. As no reasonable objection can be given why we cannot make this Fair in every way successful, we hope and urge upon our whole surrounding people to lend their efforts to making it what it should be—a medium for communicating to the public all matters of interest, and all improvements, especially, in matters pertaining to our material interests. Already have we been notified by gentlemen in other cities and communities, that they would be in attendance with articles and stock. We are very happy to believe and know, from the assurances made us, that very deep interest is felt in this Fair by gentlemen abroad, who are prepared to contribute a great deal to its interest. Now let our own people take hold of the matter as they should. We are glad to find so much interest as is manifested in it, but more life must thrown into it. The Executive Committee are bending their every effort to make everything most satisfactory. We know that these gentlemen will leave nothing undone that can possibly conduce to the success or the pleasure of the Fair."

There will be another Fair by the Rockbridge Agricultural and Mechanical Society, which takes place at Lexington on the 14th, 15th and 16th of October. Their schedule of Premiums, Rules, &c., will be duly announced to the public.

VIRGINIA HORTICULTURAL AND POMOLOGICAL SOCIETY.

The second Annual Exhibition of this Society will commence on the 22d of September, and be continued for at least three days. The rules and regulations, together with the names of the judges of award, will be published in pamphlet form. The following schedule of premiums has been adopted by the Executive Committee:

PREMIUMS.

The premiums will be announced and awarded on the last evening of the Exhibition. The reports of the Judges will be handed in to the Executive Committee on the evening of the second day of Exhibition, unless hereafter otherwise provided.

The decision of the Judges on premiums will be regarded as final in every exercise of their legitimate authority; but where this authority is departed from, their awards will be reviewed by the Executive Committee.

To entitle an article to a premium, it must not only possess the required superiority over others exhibited, but must, in the opinion of the Judges, possess sufficient merit to entitle it to the premium.

No one subject shall receive two premiums by the awards of different Committees of Judges at this Exhibition, unless one of the premiums was offered distinctly as an additional premium.

Where two subjects of the same kind are considered by the Judges to possess equal and sufficient merit, so that either alone would receive the premium, the committee of award must divide the first and second premiums (if two are offered,) equally between the competitors; and if but one is offered, divide that one equally between them.

Should anything be exhibited for which no premium was offered, which the

Judges consider worthy of such notice, the Chairman may give to the exhibitor a certificate commending it to the Executive Committee for a premium.

Certificates will be given with the premiums, if desired; and certificates of merit will be awarded by the Executive Committee upon the recommendation of the Judges.

Should the receipts justify it, the Executive Committee will award discretionary premiums on such articles as they deem most worthy of those recommended to their special notice by certificate of the Judges.

Premiums of ten dollars and over will be paid either in money or plate, at the option of the receiver.

Three members of each Committee will be a quorum.

One great object of the Society being to collect valuable information, the several Committees are requested to gather all the information possible from exhibitors in their classes, and to make their reports as full as time and circumstances will permit.

SCHEDULE OF PREMIUMS.

CLASS I.

1. *Horticultural Implements.*—For the most extensive and valuable collection of horticultural machinery and implements manufactured by the exhibitor, $20
2. For the best dozen baskets of different kinds, made of Southern grown material, 5
3. For the best and cheapest crate and baskets for marketing berries, 10
4. For the best and cheapest boxes, containing one bushel, for marketing peaches, 4

CLASS II.—ORCHARD PRODUCTS.

1. For the best and largest collection of fruits, $10
2. Second best, 5
3. Third best, Certificate.
4. Best collection of apples, not less than five varieties, 7
5. Second best, 3
6. Third best, Certificate.
7. Twelve finest specimens of apples, one or more varieties, 4
8. Second best, 2
9. Best collection of pears, not less than five varieties, 7
10. Second best, 3
11. Third best, Certificate.
12. Twelve finest specimens of pears, one or more varieties, 4
13. Second best, 2
14. Twelve finest specimens of peaches, one or more varieties, 4
15. Second best, 2
16. Best collection of grapes, not less than five varieties, 3
17. Second best, Certificate.
18. Twelve bunches best grapes, one or more varieties, 4
19. Second best, 2
20. Twelve best quinces, 2
21. Best specimen ripe figs, 4
22. Best bushel of dried apples, 2
23. Best bushel of dried peaches, 2

CLASS III.—GARDEN PRODUCTS—VEGETABLES.

1. Best and largest collection of vegetables, $10
2. Second best do. do. 5
3. Best dozen beets, 2
4. Second best, Certificate.
5. Best dozen cabbages, 2
6. Second best, Certificate.
7. Best dozen cauliflowers, 2
8. Second best, Certificate.
9. Best dozen carrots, 2
10. Second best, Certificate.
11. Best dozen celery, 2
12. Second best, Certificate.
13. Best dozen cucumbers, 2
14. Second best, Certificate.
15. Best dozen egg-plants, 2
16. Second best, Certificate.
17. Best dozen kohl rabbi, 2
18. Second best, Certificate.
19. Best dozen lettuces, 2
20. Second best, Certificate.
21. Best dozen parsnips, 2
22. Second best, Certificate.
23. Best dozen pumpkins, 2
24. Second best, Certificate.
25. Best dozen radishes, 2
26. Second best, Certificate.
27. Best dozen salsify, 2
28. Second best, Certificate.

29. Best dozen squashes, $2
30. Second best, Certificate.
31. Best peck of onions, 2
32. Second best, Certificate.
33. Best half bushel sweet potatoes, 2
34. Second best, Certificate.
35. Best half-bushel Irish potatoes, 2
36. Second best, Certificate.
37. Best peck of peppers, 2
38. Second best, Certificate.
39. Best half-bushel turnips, 2
40. Second best, Certificate.

CLASS IV.—FLORAL DEPARTMENT.

1. Best collection of cut flowers, $10
2. Second best, 5
3. Third best, Certificate.
4. Handsomest design, 5
5. Second best, 3
6. Third best, Certificate.
7. Handsomest basket of flowers, 1
8. Handsomest bouquet, 1
9. Handsomest cross, 1
10. Best collection of plants in pots, 10
11. Second best, 5
12. Third best, Certificate.
13. Best roses (in pots), 4
14. Second best, 2
15. Third best, Certificate.
16. Best verbenas, 2
17. Second best, 1
18. Third best, Certificate.
19. Best crysanthemums, 2
20. Second best, 1
21. Third best, Certificate.
22. Best foliage plants, 2
23. Best fuschias, 2
24. Best hanging basket, 1

CLASS V.—HOUSEHOLD DEPARTMENT—BUTTER AND CHEESE.

1. Best specimen fresh butter, not less than 10 pounds, $10
2. Second best, 5
3. Best firkin of salted butter, not less than four months old, 10
4. Second best, 5
5. Best cheese, not less than 20 lbs., 10

The methods of making and preserving the butter and cheese to be stated by the exhibitor.

HONEY AND BEE-HIVES.

6. For the best specimen of honey, not less than 10 lbs., 10
7. Second best, 5

The honey to be taken without destroying the bees—the kind of hives used, and its arrangement to be stated or shown by the exhibitor.

8. Best bee-hive, of Southern invention or arrangement, 10
9. For the best and most productive colony of bees—a swarm of 1868, to be exhibited, 10

BACON HAM, ROUND OF BEEF, &C.

10. Best ham, cured by exhibitor, 8
11. Best round of beef, cured by exhibitor, 8
12. Best beef tongue, cured by exhibitor, 2

Manner of curing each to be described by exhibitor.

BREAD, CAKE, &C.

13. Best home-made bread, 3
14. Do. do. pound-cake, 3
15. Do. do. sponge-cake, 3
16. Do. do. varieties green pickles, 3
17. Do. do. yellow do., 3
18. Do. do. preserves, 3
19. Best home-made fruit jelly. 3
20. Best specimen walnut catsup, or sauce, 2
21. Best do. tomato do. do., 2
22. Best do. home-made soap, the process of making to be described, 5

CLASS VI.—DOMESTIC MANUFACTURES.

1. For the best quilt, $5
2. Second best, 3
3. Best cotton or yarn counterpane, 5
4. Second best, 3
5. Best pair home-made blankets, 5
6. Best home-made carpet, 8
7. Best home-made hearth-rug, 5
8. Best set home-made curtains, 5
9. Second best, 3
10. Best pair long yarn hose, 3
11. Best pair long cotton hose, 3
12. Best silk hose of home-made silk, 8

CLASS VII.—LADIES' ORNAMENTAL AND FANCY WORK.

1. Best home-made shirt, $5
2. Best specimen of embroidery, 5
3. Second best, Certificate.
4. Best specimen of worsted work, 5
5. Second best, Certificate.

6. Best specimen crochet work, $5
7. Second best, Certificate.
8. Best specimen wax work, 5
9. Second best, Certificate.
10. Best specimen shell work, 5
11. Second best, Certificate.
12. Best specimen of knitting, 5
13. Second best, Certificate.
14. Best specimen of netting, 5
15. Second best, Certificate.
16. The most extensive variety of useful, ornamental and fancy work, not excluding articles which may have had premiums awarded them under any of the above specifications, 10

CLASS VIII.—GRAPE WINES, &C.

1. Best specimen of home-made wine, of any variety of grape, $8
2. Do. do. do. Catawba wine, 5
3. Do. do. do. Concord wine, 5
4. Do. do. do. Norton wine, 5
5. Do. do. do. Scuppernong wine, 5
6. Do. do. do. Isabella wine, 5
7. Do. do. do. Ives wine, 5
8. Do. do. do. Herbemont wine, 5
9. Do. do. do. Currant wine, 5
10. Do. do. Blackberry wine, 5

Correspondence of Southern Planter and Farmer.

CAUTION AGAINST IMPROPER MIXTURES OF FERTILIZERS.

Dear Sir,—A young farmer friend lately addressed some enquiries to me in regard to the application of hen manure and ashes to wheat, which, in order to obtain accurate information, I referred to Col. Gilham, of the Southern Fertilizing Company, who replied:

"Bo h ashes and hen manure are admirable applications for wheat, but they must be applied separate. If mixed, the ashes being caustic, would cause the expulsion of the ammonia from the hen manure. The proportion of hen manure proposed to be used is not too great.* Twenty bushels of ashes to the acre might safely be used. Lime would not do to use with the hen manure; it would also cause the expulsion of ammonia. Plaster mixed with the hen manure would have the effect to retain ammonia."

Col. Gilham is unsurpassed as a chemist—especially as connected with agriculture. Planters and farmers who propose to use fertilizers can obtain from him the most reliable information as regards their applicability to the production of any crop—without charge—and I *know* would do well to avail themselves of it.

I send you his brief reply to the enquiries of my young friend, that if you think it worth a place, others may profit by it. I do this without his knowledge, and possibly am not doing him justice, since he might have preferred a more elaborate reply for publication. Very respectfully yours,

W. H. Richardson.

August 8, 1868.

CROPS IN FRANKLIN COUNTY, ARKANSAS.

My Dear Sir,—Your esteemed favor of the 29th ult. is to hand. You request me to furnish you from time to time with reports of crops in this section. I will take pleasure in complying with your wishes to the best of my ability and information. My personal knowledge of the growing crop does not extend above a few miles from my own farm; and I am pained to say that we have the sorriest corn crop I ever saw, and the oldest inhabitants say it is the poorest ever raised on Arkansas river bottoms. We have had no rain since the night

* Have not the note at hand, and can't state the amount.

of the 5th June, and everything except cotton has sustained serious and irreparable injury thereby; and from what I can learn, the crops generally in Northwest Arkansas will be far below an average yield, though some spots (portions of Carroll county, for instance), have been more fortunate. The wheat crop was also damaged to some extent by rust. Oats have done finely, as far I know.

This country being comparatively new, and having no churches or schools, is settled up almost entirely by ignorant people of limited means, who raise nothing but corn, cotton and hogs, though we are blessed by nature with a soil unsurpassed for fertility and adaptability to the successful culture of nearly everything that will grow either North or South. As for myself, this is my first year at farming. My crop is about as good as my neighbors', and I have a greater variety planted, and am confident that I shall make more clear money to the force employed, land cultivated, and expenses incurred, than any of my neighbors; and my success may be attributed, in a great measure, to the fact, that I take several (say eight) agricultural papers, and I honestly believe that I would make money by taking every one published in the United States; and I have noticed that the best and most prosperous farmers are those who subscribe to agricultural papers.

I am doing as much as my limited means will allow me, to develop the agricultural resources of this section. I have made several experiments this year, will make many more next, and will be pleased, if you desire it, to give you the results thereof; and if you will state plainly the points upon which you desire information, I will take pleasure in giving it to you, and will even put myself to some trouble in order to do so. Yours truly,

CHAS. WALLACE.

Roseville, Franklin county, Arkansas, July 20, 1868.

ENCOURAGING NEWS FROM ARKANSAS.

My Dear Friend,—I am just returning from a hurried trip on professional business up the St. Francis river, and, in compliance with my request, drop you a line merely to "post you up" relative to the agricultural prospects of this portion of the State of my adoption.

I found the farming community hopeful and happy with the fine prospects ahead, both for a large corn and cotton crop—recent heavy rains filling their hearts, *in prospectu,* with "food and gladness."

Two features in this flourishing section of our State gladdened my spirit no little. First, the alacrity with which the young men who had been accustomed to lives of ease and luxury, were taking hold of the plough handle, and their bronzed brows and vice-like hands told me there was "life in the old land yet."

Secondly, the small number of colored laborers employed by the smaller farmers; the husband doing the out-door work, while the wife, "on hospitable thought intent," attended to domestic matters.

If every man, not only in our own State, but in all of our stricken Southern country, would realize the truth, that when he "worked with his own hands," as the Bible has commanded him to do, he was saving for himself, and thus the State at large, not less than $300 per annum, our desolated land would soon "rejoice and blossom as the rose."

A third feature also shows signs of progress in the right direction, and that is, a demand for an educated ministry, and competent teachers, both male and

female. A flourishing Presbyterian church, of about twenty members, has just been organized at Wittsburg, Cross county, the head of navigation on this river, and the citizens of this wide-awake little town say they will not be satisfied until a school of the highest grade is established in their midst; and

Lastly, Mr. Editor, they have contracted the strange habit, out here, of paying both teachers and preachers, and that, too, abundantly.

Yours respectfully, THOS. WARD WHITE.

Steamer "Mollie Hambleton," St. Francis River, Ark., July 18, 1868.

CROP PROSPECTS IN YAZOO COUNTY, MISSISSIPPI—A TERRIBLE CATTLE DISEASE.

Mr. Editor,—Rain, rain, rain, and nothing but rain, for the last month or six weeks; and it looks as if it will continue for a while longer. The cotton crop is outgrowing anything I ever saw, and so much wet weather has caused it to commence shedding; but if the army worm does not take a fancy to the good looks of cotton, there will be a pretty fair crop raised in this neighborhood—and most farmers think will bring a very good price, as there was not one-half as much planted this year as last. Several of our farmers have commenced picking. They are trying to get the first bale from the Yazoo river, as the steamer Calumet—the only regular packet—has offered five gallons of fine whiskey to the one who shall ship the first bale, and whiskey is a thing that most of the Yazoo planters believe in.

As for the corn crop, the rain was rather too late for the first planting, which was considerably the largest, although I believe that there will be corn in abundance, and that will be better than anything else I know of. It has been a great item for the last two years.

A farmer in this neighborhood sowed about twelve acres in wheat, and reaped about sixteen bushels per acre. This is generally thought to be a very good yield, but I give no opinion, as I know very little about the cultivation of that grain. It is to be hoped the farmers of the South will turn more of their attention to wheat and other small grains than they have heretofore done.

We have had a very virulent and fatal disease among our cattle and work stock, which continued until June, but has since nearly abated, as I have not heard of any new cases for the last two weeks. The disease is known as Charbonne, commencing by a slight swelling on no particular part of the animal, about the size, when first noticed, of the bite of a horse-fly, and in the course of a couple of hours you can almost discern it move; and often causes death to the animal in from ten to twenty-four hours. If they are living after twenty-four hours, they are apt to recover. I was traveling a few weeks since on the Yazoo river, and passed by several plantations where this disease had been raging, and on one plantation, farmed by Col. D. S. Saffrons; I learned that he had lost his entire stock, consisting of nineteen head of mules, besides all the cows that were on the place. I was also informed that twenty-five mules had died of this terrible pest on the plantation just below him, and that no treatment would do any good. I hope there will never be such another visitation of this disease in Yazoo county, or anywhere else. I trust we shall soon be blessed with dry weather, fine crops, and get good prices for them.

I remain, very respectfully, yours truly,

JOHN MCKEE.

Locust Grove Plantation, Yazoo county, Miss., August 18, 1868.

AVERAGE YIELD OF WHEAT IN EASTERN VIRGINIA—A WORKING FARMERS' CLUB IN WESTMORELAND.

My Dear Sir,—Wheat threshing is over, and the crop may now be ascertained with some degree of accuracy. I am sure that I have not underrated it, in estimating the yield in Eastern Virginia as not exceeding five bushels for one sown. Early varieties, on dry lots, highly manured, have made a better return; but a large majority of the crops have not reached that average. This is very discouraging, but our farmers have strong faith, and are preparing to sow again. Our old varieties of seed wheat have run out. The Boughton, Ruffin's early purple straw, an early Northern white wheat, the blue stem white, and the Lancaster red, are the varieties most common here. The earliest have done best, but none have done well, and the blue stem white, a very late variety, has proved an entire failure. I hope to get a supply of good seed from the Valley.

According to the *Mark Lane Express*, said to be the very highest authority, the crop of England must have been the most extraordinary on record. The climate of California seems to have been transferred to England, and the yield of her late harvest has rivalled the almost fabulous production of the great Pacific State. Wheat weighing 65 lbs. to the bushel, and yielding seven to eight quarters (of a ton) to the acre, is certainly a most wonderful production. But for the scarcity which is said to prevail in other parts of the world, we should be driven from the market by the reputed exuberance of England and the Great West. Fortunately for the producing class, the extraordinary fecundity of the field is quite equalled by the fecundity of population, which is steadily pressing on the means of subsistence. The theory of Malthus may never be realized, yet I think farmers need entertain no apprehension that the demand for their crops will ever be less, or that production will be in excess of the demand. The tendency of population in modern times, and especially in this country, is to concentrate in the cities and towns, where men may live by their wits, and avoid the continuous labor of the farm. The last census affords striking proofs of this tendency, and the rapid increase of city population in the United States finds no parallel in history.

I have practiced sowing wheat with the drill for many years, and I will state an opinion which I have formed, as the result of my experience and observation, which may possibly be regarded as peculiar. In Eastern Virginia more seed are required to be sown by the drill than broadcast. Many of our best farmers have regarded a bushel of seed to the acre as quite sufficient. This was the opinion and practice of Mr. Edmund Ruffin, who was most successful as a wheat grower, and I have myself frequently reaped from sixteen to twenty-two and a half bushels from one sown to the acre, on extensive fields. Farmers, I dare say, now sow rather more seed, but ten or fifteen years ago a bushel to the acre was the usual quantity, and many sowed less. On rich or highly manured land, the wheat tillered greatly, and at harvest was very thick. Sowed in the drill, there is no room for tillering, hence a bushel of seed is not sufficient, and not less than a bushel and a quarter or a bushel and a half is required. I am confident I have several times lost considerably by sowing only a bushel of seed to the acre through the drill. Our farmers, I think, have been misled by the repeated recommendation by the venders, of the drill as requiring less seed than broadcast sowing. This may be entirely true where two

bushels or more are required broadcast, but it does not apply to any region where one bushel is sufficient. The drill, however, should not be rejected on this account. It is an indispensable labor-saving implement, in the present condition of our agriculture.

Last spring we established a Farmers' Club in this neighborhood, consisting of thirteen most intelligent farmers. We have appointed committees on Labor, Machinery, Stock, Fertilizers, Trenching, &c., &c. The committee on fertilizers is instructed to make a searching inquiry into the value of all the fertilizers used in this region, and a fair statement of their effect compared with Peruvian guano. I have no doubt that the investigation will be thorough, and made with entire fairness; and its results may be relied upon. The committees are expected to make their reports soon, and the Secretary will be instructed to furnish you copies for publication.

Notwithstanding the willingness, indeed, anxiety, of our people to sell land there have been few sales in this neighborhood. Enquiries have been frequent, and visitors numerous. The lands are highly praised and regarded as cheap, yet for some reason purchasers have held off. A demand more earnest and effective is now springing up, and I think sales will henceforth be frequent and satisfactory. My son Willoughby, yesterday sold his farm, "Woodbourne," containing five hundred and nine acres of good forest land, with comfortable improvements, occupied since the war by a tenant, for eleven thousand dollars, in payments equivalent to cash. This is nearly twenty-two dollars per acre; and though much less than the intrinsic value of the land, may be regarded, under the circumstances, a good sale. The purchaser, a Marylander, after the sale was completed, was asked what the farm would bring if located in Kent county, Maryland. He replied not less than $60 per acre; yet the farm is within ten hours of Baltimore by steam, and has all the advantages that it could possess if in Kent county.

Our people should be of good cheer; a better day is coming. I would repeat the advice that has been so severely criticised by some of our utilitarians, who seem strangely to think that the readiest way to make the State rich is to reduce to beggary a majority of the existing population. My advice is, sell your surplus land at a fair price, but do not, under the influence of panic or of feverish anxiety about the state of your affairs, *give them away*. Cling to your homes, which are consecrated by early recollections and the hallowed dust of your ancestors. Let us all unite in a liberal and catholic spirit, in support of all the material interests of the Commonwealth—her agriculture, commerce, manufactures, and public works. Let the State be re-invigorated by capital and population from abroad, but let Virginia continue to be Virginia still. The young men of the rising generation will be quite competent to fill the place of their fathers, and if their minds are properly directed, will not only promote and advance all the material interests of the State, but will preserve that moral and intellectual power, which in times past secured the ascendancy of Virginia in the public councils, and her undying renown throughout the world.

With true regard, your friend, &c.,

WILLOUGHBY NEWTON.

Linden, Westmoreland county, Hague P. O., August 26, 1868.

WILD TIMOTHY AND HERDSGRASS ON MT. MITCHELL, N. C.

Editor Southern Planter and Farmer,—Please receive enclosed specimens of timothy and wild herds' grass, measuring over four feet, which I gathered August 21st, upon the summit of Mt. Mitchell,* 6,707 feet above the level of the sea, and the highest point of land east of the Rocky Mountains. These grasses grow *very thick* everywhere there is a clearing, or where the sun can make its way through the dense forest of Balsam. The soil is a rich black loam, six to ten inches deep. Delicious red raspberries grow upon the summit; the canes are thornless, and are covered with a soft red fur. Gooseberry bushes grow very high—about seven feet—the fruit is small, but sweet. Do the mountain summits of Virginia produce such grasses and such fruits?

Mrs. Wm. J. Brown.

Buncombe county, N. C., August 26, 1868.

* This mountain bears the name of the late Dr. Mitchell, former Professor of Geology, Mineralogy, &c., in the University of North Carolina. In his enthusiastic and eager pursuit after knowledge, while exploring this mountain with the purpose of enriching his cabinet with specimens of its geological conformation and its mineralogical contents, was precipitated from one of its promontories and instantly killed. He thus fell a martyr to science, and his remains fitly lie buried near, or upon the summit of Mt. Mitchell, which is at once his tomb and his monument.—Ed. S. P. & F.

Housing Cabbages.

Mr. Editor,—Some time since I had a conversation with a neighbor as to the best and most economical method of putting up vegetables, such as cabbages, potatoes, &c. The following plan was suggested for a cabbage house as one worthy of having its merits tested by experiment:

Prepare straight slender poles (pine or other), two or three inches in diameter, of proper length, say eight feet; clean off your ground, and commence as though you were going to build a plain rail pen, three-cornered, using two poles instead of one, so as to make each side or wall double, with a space of eight inches between the poles. At one corner an opening is left two and a half feet wide, for a door or entrance. To close and make secure, a cheap batten door may be made, and hinged to posts or jambs fastened to the wall of poles, after the fence is completed. The first tier or floor of poles having been arranged, put on a row of cabbages, the roots occupying space between the poles, and the heads turned in and pressed compactly together. Cover the roots with friable soil, and place on another tier of poles and cabbages, and continue filling up space each time with soil, until you have gained the requisite height. A few poles thrown across the top, and a heavy covering of pine tops, corn stalks, or any litter that will furnish a secure covering, is all that is necessary to complete the house. Corn stalks, or some other protection, should be placed against the outside for fear of severe freezes, &c.

A trench should be dug around the outside, and the dirt thrown against the cornstalks. They will serve to render the floor or inside dry.

The cabbages thus housed will be very convenient of access in mid-winter, and will continue as fresh as if buried under ground. All that is necessary is

a knife, with which you sever as many heads as you want at a time, leaving the stalks to give you a supply of early coleworts in spring.

In the interior you may stow away potatoes, turnips, &c., &c., which will keep, retaining all their freshness.

If your gardeners have never tested the merits of this method, I hope several will do so this fall, and communicate the result of their experiment to the *Southern Planter and Farmer*. F.

Lexington, Va., August, 1868.

Lespedeza Sciata, or Japanese Clover,

Mr. Mott has rendered a signal service to our farmers in bringing to their attention this invaluable accession to the fertilizing and feeding resources of the South. Truly it is, as he says, "a Godsend"—a boon from the hand of Infinite Beneficence—an inestimable resource for the enrichment of our worn out lands, alike for purposes of pasturage and tillage. We hope not a few of our readers will be stimulated to make the necessary arrangements for procuring the seed for spring sowing, and that our intelligent and enterprising seedsmen will provide themselves with a supply of seed in time to meet the demand.

Richmond Fertilizing Mills.

This is the name of the new Fertilizing Mill recently established in our city. It commences operations under most flattering auspices. The manipulating department is under the management of Messrs. C. & R. W. McGruder, so long engaged in this business here, and extensively known throughout Virginia and North Carolina, as in every respect worthy of the confidence of the people. The official department is in charge of J. R. Allen, Esq., well known in banking and financial circles, while the entire business is wisely advised and directed by our enterprising fellow-townsmen, the Messrs. Warwick, of the Gallego Mills.

We wish for *this*, and any other manufacturing enterprise in which the parties may engage, the largest measure of success.

We thankfully acknowledge the receipt of a second invitation to visit the Manipulating establishment of G. Ober, Esq., of Baltimore, Md., and hope that at no distant day we shall be enabled to do so. Mr. Ober is the manufacturer of the justly celebrated "*Kettlewell Mixtures*," and from personal knowledge, and the high testimonials offered in his advertisement, we commend him to the confidence of our people.

Fertilizers.

The time approaches when every farmer must decide as to what fertilizer he must buy, and *this* each should endeavor to do wisely. The comparative failure of the wheat crop for the past three years has discouraged many from purchasing, but it is now pretty generally conceded, that without fertilizers in some shape, a wheat crop cannot be hoped for; therefore, *buy* you *must*, or not reap. Many candidates are in the field, as will be seen by reference to our Advertising Sheet, and we would recommend to our readers a *careful reading of this sheet*, and examination into *references offered by vendors*, before pur-

chasing, unless previous knowledge and experience should be satisfactory in regard to some particular fertilizer. Our advertisers at home we know, and in other cities, so far as we are advised, have proven themselves worthy of confidence. If our friends will report their experience, they will benefit others.

Book Notices.

The War between the States; its Causes, Character, Conduct and Results. By Hon. Alexander H. Stephens. National Publishing Company, Philadelphia, Pa. Vol. I.

This work is illustrated with several fine steel plate engravings—Portraits of Washington, Jefferson, Calhoun, &c.—and in mechanical skill, artistic taste, neatness, and liberal expenditure, in its execution, the volume is highly creditable to the publishers.

The dignity, candor, and moderation with which the subjects embraced within the scope of the author's inquiries are discussed, lend a charm to the book which is highly refreshing, especially after one has been nauseated with the loathesome sensational fictions which are being palmed off upon the public as veritable histories of "the great Rebellion"—so called. The principles upon which the union of the States was founded are laid bare and irreffutably vindicated and established, and the war of aggression, waged by the North upon the rights of the South, are shown to have been in palpable violation of the covenants of the Constitution, and in derogation of the sacred obligations of *truth*, of *justice*, and of *honor*.

The Leonard Scott Publishing Company, New York.—We acknowledge "The Edinburgh Review" for July, "The Westminster Review" for July, and "Blackwood" for August, 1868. We need not repeat that these are all of great interest, and we again commend them to the patronage of our friends.

The Galaxy.—The September number of this handsomely illustrated monthly is exceedingly attractive, and it is well worth the subscription price—$4 per year. Address Shelden & Co., 498 and 500 Broadway, New York.

The Richmond and Louisville Medical Journal, for August, presents itself in an enlarged form, and gives evidence of both ability and thrift. That our friend, Dr. Gaillard, may receive the generous support he so richly deserves, is our most earnest wish.

The New Eclectic.—This admirable monthly should grow in favor daily, and become "the Eclectic" of the South and West. It is ably conducted, handsomely gotten up, and is offered at the low price of $4 per annum. Address Lawrence Trumbull & Fridge Murdoch, Editors and Proprietors, Baltimore.

"The American Wheat Culturist."—The above is the title of a book from the pen of S. Edwards Todd, Esq., the well known Agricultural and Horticultural editor of the "New York Times," and for which we are indebted to the courtesy of the publishers, Messrs. Taintnor Bros., 229 Broadway, New York.

At no time could such a work prove more opportune; and while we have not had time to examine it carefully, Mr. Todd's experience is extensive, and we hope, as embodied here, it will prove of much value to our friends engaged in wheat culture.

THE WINE-MAKERS' MANUAL is published by Messrs. Robert Clarke & Co., 65 West Fourth street, Cincinnati, Ohio, to whom we are indebted for a handsome copy. It seems to deal with the subject of wine-making in a plain, practical way, and cannot fail to prove valuable to new beginners. It is sent by mail, pre-paid, on the receipt of $1.25.

THE LITERARY PASTIME.—This handsomely illustrated weekly is a new candidate for favor, and well deserves patronage. A. F. Crutchfield, Esq., is favorably known to our people, and has shown, by the specimens already issued, that he knows how to get up a popular paper.

Commercial Report.

RICHMOND, VA., September 1, 1868.

There is more activity in general trade, and country merchants are beginning to arrive in the city. The closing week of last month showed a falling off in the breaks of Tobacco, and there is in consequence more activity in this staple, with prices a shade higher.

Wheat continues to arrive, but much of it is damp and otherwise out of order, and prices (under a fair supply), have failed to hold the advance in price along in August.

While this crop in Virginia is probably better this year than at any time since the close of the war, it is at best a failure, while we rejoice to know that our friends in North Carolina and in the Middle and Western States have been more highly favored. We hope that the growing crops of Corn and Tobacco in Virginia and North Carolina are splendid, and that business will improve this fall, in spite of the heated political canvass now in progress.

Below we give the inspections of Tobacco in Virginia for the month of July:

Richmond,	4,366
Petersburg,	1,312
Lynchburg,	80
Farmville,	108
Total hhds.,	6,766

Inspections in the State of Virginia from 30th September, 1867, to 1st August, 1868, 38,205 hhds.

We annex the following quotations:

TOBACCO—LEAF—Common working, dark and sun-cured,	$9 00 to 10 00	LEAF—Extra Wrappers,	50 00 to 100 00
Fair working do. do.,	11 00 to 12 00	Common Shipping,	9 00 to 11 00
Good working do. do.,	13 50 to 16 00	Medium Shipping,	12 00 to 13 00
Fine sun-cured,	18 00 to 28 00	Fair Shipping,	13 50 to 14 00
Common Bright,	13 00 to 15 00	Good Shipping,	14 00 to 15 00
Fair Bright,	18 00 to 20 00	Fine Shipping,	15 50 to 17 50
Good,	25 00 to 30 00	English Shipping, good and fine,	14 00 to 18 50
Fine,	35 00 to 45 00	Good and Fine Stemming,	nominal.
LUGS—Very inferior and light weights,	$6 00 to 7 00	LUGS—Sweet working,	10 00 to 11 00
Common, good weights,	7 00 to 8 00	Common Bright,	12 00 to 14 00
Common Shipping,	8 50 to 9 00	Medium Bright,	15 00 to 18 00
Fair Shipping,	9 50 to 10 00	Good Bright,	20 00 to 22 50
Good Shipping,	10 50 to 11 00	Fine Bright,	25 00 to 30 00 and 35 00

WHEAT—Prime Red, $2 35@2 40; prime White, $2 45@2 50.
CORN—White, $1 25; Mixed, $1 22@1 25.
RYE—Good to prime, $1 30@1 25.
OATS—Fair to good, 50@55c.; prime, 60c.